NORTHEAST MARKETING ISSUE
Pages 9-16

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USDA Activates Conservation Plan For Great Plains

Brush Control One of Eligible Cost-Share Practices

WASHINGTON—Activation of the Great Plains Conservation Program, authorized by Public Law 1021 enacted by Congress last year, has been announced by the U.S. Department of Agriculture. A Congressional appropriation of $10 million for the first year's operations is available.

Ezra Taft Benson, secretary of agriculture, issued regulations and operating procedures for the program, and designated 221 counties in 10 Great Plains states as eligible to receive program assistance. Purpose of the program, the Secretary said, is to assist farmers and ranchers in carrying out conservation plans through long-term cost-sharing contracts that will help to minimize climatic hazards and protect their lands from erosion and deterioration by natural causes.

The program will be operated as a cost-sharing plan for farmers who sign contracts to carry out certain conservation operations. One of the eligible practices is brush control.

The 221 eligible counties are located in Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas and Wyoming.

The new program, Secretary Benson emphasized, supplements existing programs and activities and does not replace any of them. It establishes no new agency. Administrative responsibility has been assigned to USDA's Soil Conservation Service. The program will be carried out in cooperation with local and state governments, the Great Plains Agricultural Council, soil conservation districts and farm organizations.

IMC Constructing $20 Million Potash Mine in Canada

REGINA, CANADA—International Minerals & Chemical Corp. plans to spend more than $20 million on construction of a potash mine near Esterhazy, Saskatchewan.

Louis Ware, president of IMC and its Canadian subsidiary, International Minerals & Chemical Corp. (Canada) Ltd., told a group of government, business and civic leaders here Aug. 23 that the new mine, for which a 3,000 ft. shaft is now being sunk about 150 miles east of this provincial capital, would play an important part in "making the North American continent self-sufficient in its need for potash for centuries to come.

"With continued development of Saskatchewan's ore reserves by this company and others, Canada and the U.S. ultimately will account for a major part of the world potash supply," he said.

The new mine shaft, to be more than a half mile deep and 18 ft. in diameter, will cost about $4,000,000, Mr. Ware said. Mining equipment, a refinery, large storage buildings, machine and repair shops and additional plant facilities will account for the remainder of the estimated cost, he said.

Tentative plans call for the employment of from 100 to 150 persons at the mine, the IMC president said.

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Latest Control Methods for Vegetable and Orchard Pests Reviewed at Ohio Field Tour

WOOSTER, OHIO—Enemies of vegetable field and orchard were in the spotlight at the summer field tour of the Ohio Pesticide Institute Aug. 13-14. One hundred chemical company representatives, dealers and a few growers attended to see latest progress in the battle of man versus pests.

A feature of the event was an airplane demonstration showing the thoroughness with which a crop can be covered in this fashion.

Ohio researchers indicated that the list of chemicals needed in the bug battle may be narrowing down. J. P. Sleesman, discussing potato insects, said that if experimenters did no more work on potato insecticides in the next five or six years, growers would still be well off. The materials now available offer adequate protection against the common insects attacking potatoes. He said the number of poisons needed by the potato grower is settling down to three or four.

Crabgrass that is giving many midwestern home owners fits this year came in for discussion by R. R. Davis. He pointed out that there are two types of this worst-of-all weeds in lawns: narrow leaf and broad leaf.

(Continued on page 20)

New Methods to Halt Plant Diseases Told To Phytopath Group

PALO ALTO, CAL.—Application of antibiotics, fungicide-insecticide combinations, and other matters concerning plant disease control were discussed at the annual meeting of the American Phytopathological Society held on the Stanford University campus here Aug. 26-28 in connection with the American Institute of Biological Sciences conference.

In a paper presented by Jack Ziffer, researcher from Pabst Laboratories, Milwaukee, Wis., the discovery of two closely-related antibiotics, phytoactin and phytostreptin, was announced. These products were produced by fermentation, using two new microorganisms isolated from soil samples obtained near Peoria, Ill., he said. The discovery represented the combined efforts of a team of Pabst scientists comprising Dr. Ziffer, S. J. Ishihara, T. J. Cairney, and A. W. Chow.

In his report, Dr. Ziffer said that phytoactin and phytostreptin gave effective control of fungus plant diseases such as early blight and late blight of tomatoes, bean rust, barley blight, and oak wilt in laboratory and greenhouse tests. These diseases annually destroy crops and trees valued at millions of dollars.

In a series of greenhouse experiments, phytoactin almost completely controlled early blight fungus of tomato when applied to infected plants as a water spray at concentration of 63 parts of antibiotic per million of water, he reported. Phytostreptin sprays were effective against the same disease at 55 parts per million.

Against late blight of tomatoes and bean rust, the two new materials were nearly equally effective—at

(Continued on page 21)

U.S. Issues Report On Chemical Output For May and June

WASHINGTON — Preliminary figures on the production of selected synthetic organic chemicals in the United States for May and June, 1957, have just been released by the U.S. Tariff Commission's chemical division.

It reports production of DDT for May as 12,880,479 lb. and in June, 11,023,156 lb.

2,4-D acid production in May was 2,780,878 lb. and in June, 3,061,244 lb. 2,4-D acid esters and salts for the respective months were reported as 2,589,358 and 1,686,123 lb., with the latter figure being partly estimated.

Benzene hexachloride production for May was 4,572,140 lb., and in June, 5,092,137 lb. Gamma isomer of BHC was produced in the amount of 707,054 lb. in May and 840,993 lb. in June.

2,4,5-T production in May was 589,044 lb. in May and 603,237 lb. in June, with the June figure being partly estimated.

The total primary production of urea was 76,563,212 lb. in May and 71,619,423 lb. the following month, the report indicated

NAC MEETING

SPRING LAKE, N.J.—Marketing problems of the pesticide industry will be featured in the program for the 24th annual meeting of the National Agricultural Chemicals Assn., to be held here Sept. 4-5. Discussion topics will include credit versus cash payment for pesticides, market research, and communication techniques. Officers and three new members of the board of directors will be elected during the meeting.

Velsicol Chemical To Produce Parathion At Memphis Plant

CHICAGO — Velsicol Chemical Corp. has announced that it will produce parathion (ethyl) at its Memphis, Tenn., plant. According to J. F. Kirk, vice president, production will start in November. At that time, methyl-parathion operations will be transferred to Memphis.

The company recently announced the availability of Velsicol gibberellins, the new plant growth stimulant. Other Velsicol agricultural chemicals include methyl parathion, chlordane, heptachlor and endrin insecticides, and insecticide and herbicide solvents.

American Agricultural Chemical Purchases Buhner Fertilizer Co.

NEW YORK—The American Agricultural Chemical Co. has announced that it has contracted to purchase the physical assets of the Buhner Fertilizer Co., Inc. of Seymour, Ind. and Danville, Ill.

The A.A.C. Co. has 30 plants and sales offices in the U.S., Canada and Cuba, and has been engaged in the manufacture of fertilizers and heavy chemicals for over 85 years. The firm owns and operates phosphate rock mines at Pierce, Fla. and produces elemental phosphorus, phosphoric acid and phosphorus compounds for industrial use.

Changes Being Made in California Seed Law

SACRAMENTO—The Bureau of Rodent and Weed Control, California Department of Agriculture, has announced that on Sept. 11 several amendments to the California Seed Law will become effective.

On that date, Halogeton, Italian thistle and Mediterranean sage will be considered secondary noxious weeds.

In addition, the labeling of vegetable seeds, in containers of more than one pound, must also include thereafter a lot identification and the month and year of the completion of the germination test.

Sections of the law relating to "treated seed" will authorize the director of agriculture to define "toxic" and "highly toxic" substances used in the treating of seed after harvest, and prescribe the manner and place that appropriate warning or caution statements shall be used in the labeling of grain or other crop seed shipped, delivered, transported or sold after treatment with toxic substances.

Another amendment will permit seed to be transported from one warehouse to another without transfer of title or be placed in storage in a warehouse when labeled only with the lot number, provided complete label information is available at the request of the enforcing officer.

APHID SPREADING

CEDAR CITY, UTAH—The alfalfa aphid was a late comer to Southern Utah, but is now gradually spreading to all the farming valleys. A few were found last year, but now there is a general infestation of alfalfa and pea aphids in most of the Iron County fields. Spokesmen for the Parkair Flying Service report that the aphids are found throughout the area and are spreading to other counties that have thus far been free of the insects.

Study of Fertility Needs Launched in Oregon

CORVALLIS, ORE.—A long-range economic study of soil fertility problems and forage crop production potential of Willamette Valley hill soils has been started by Oregon State College under a cooperative agreement with the Tennessee Valley Authority.

TVA will contribute $33,500 toward the study during the next five years.

Findings will help the college to pinpoint the economics of fertilizer recommendations for the hill soils and help lead to expansion of forage crop production in western Oregon, soil scientists point out.

"More and more hill soils will have to be—and can profitably be—utilized in the future for forage crop production as the population continues to grow in the Valley," they explained. More adquate information on soil fertility is needed, it was pointed out.

S. H. McAllister

SHELL APPOINTMENT—S. H. McAllister, director of Shell Development Co.'s agricultural research division at Denver, has been appointed to succeed F. W. Hatch who is retiring as manager of Shell Chemical's agricultural chemical sales division (Croplife, Aug. 19, page 21). Mr. McAllister will assume his duties at the firm's head office, New York, Nov. 1. Mr. Hatch will retire Dec. 31, after completing more than 25 years' service with Shell. Mr. McAllister was born in Salt Lake City. He received his A.B. and M.A. degrees in chemistry from Stanford University before joining Shell Development Co. in 19[illegible] as an assistant chemist in Emeryville, Cal. After serving as a research chemist and department head, he became associate director in charge of process development and pilot plant at Emeryville in 1942, and in 19[illegible] was made associate director of petroleum technology. He assumed his present position and transferred to Denver in September, 1955.

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Conservation Minded Farmer Uses Fertilizer To Build Crop Yields

CLAYTON, DEL.—Kurt Schettler, who operates a 296 acre farm near here, is subject of a feature story in the September issue of Soil Conservation, published by the Soil Conservation Service of the U.S. Department of Agriculture.

"Conservation farming doesn't cost—it pays," Mr. Schettler says.

He has made good use of fertilizer to help build up yields to 95 bu. of corn and 35 to 40 bu. of soybeans an acre. He gets 35 bu. of wheat an acre on land that once was too wet to grow any kind of grain.

As part of his over-all conservation program Mr. Schettler rotates his crops and fertilizes and limes his soil by test. He limes each field every three or four years. For planting and topdressing corn he uses up to 700 lb. of commercial fertilizer an acre. He uses about 300 lb. of fertilizer on his soybeans and 600 lb. on his small grain.

Connecticut Legislature Calls Drouth Session

HARTFORD, CONN.—A special session of the Connecticut state legislature has been called for Sept. 17 to act on farm tax-relief proposals and other problems arising as a result of the summer-long drouth.

The session was called by Gov. Abraham A. Ribicoff following a conference with farmer representatives and leaders of both parties in the legislature.

One of the problems the special session will be asked to consider will be specific drouth-relief measures to assist farmers estimated to have already lost $10 million on hay and other silage crops.

lew Insect Attractants Being Sought by SDA to Determine Future Spray Programs

WASHINGTON—Natural and syn-tic attractants to lure insects are ing sought by research chemists d entomologists as weapons for re effective control of agricultural d other insect pests, the U.S. De-rtment of Agriculture reports.

Effectiveness of three attractants s been demonstrated during the st year in the Mediterranean fruit (Medfly) eradication program op-ting in Florida under Federal-te direction. An attractant also is ng used in the Federal-State plan eradicate the gypsy moth from arly 3 million acres of forest land New York, New Jersey, and Penn-vania.

In the Medfly program, both a atural and a synthetic attractant ave been used to lure the flies into raps to detect their presence and bundance in different areas. In ad-ition, a food-like attractant that is ixed with an inseticide lures the he flies to consume the bait.

Now in the "clean-up" stage, Med-eradication is being aided materi-ly by a new synthetic lure and the od-like protein hydrolysate bait, hich were opportunely discovered, veloped and tested by chemists and tomologists of USDA's Agricultur-Research Service.

The attractant used in the gypsy-oth eradication program is prepared om female gypsy moths. It lures ale moths to baited traps from dis-nces of at least half a mile.

Catching the male moths is impor-nt. First, it is a means of checking e effectiveness of spraying to kill e foliage-eating larvae this season. ombined with manual scouting, it is so a means of locating egg-masses at will produce larvae next year. he need for spraying programs next ear can be determined by the num-er of egg masses found in given reas this year.

Success of the different attractants ow in use has encouraged the search r new natural and synthetic com-ounds that will prove effective not nly for Medflies and gypsy moths, ut for other destructive insects as ell.

Chemists at USDA's Agricultural Research Center, Beltsville, Md., are searching for such compounds among hundreds of natural plant materials and organic synthetics. Several new and promising attract-ants have already been developed.

Common weeds, familiar vegeta-les, flowers, and other plants are mong the plant materials being in-estigated.

Work with organic synthetics em-races an entirely different field of ffort. Initial work with such materi-ls, as is the case with natural ma-erials, is done usually without prior nowledge that they may be attrac-ive. But the development of one at-ractant from a given organic syn-hetic frequently leads to the devel-pment of other and sometimes more ffective compounds from a related aterial.

An example is the initial discovery y USDA scientists that the propyl ster of the organic synthetic 6-ethyl-3 - cyclohexene - 1 - carboxylic cid was an attractant for male Med-lies. Next, the isopropyl ester of this rganic synthetic proved to be far ore efficient than the propyl ester.

This compound was then made in commercial quantities, following ac-tual field-testing in Hawaii. It was used in the Medfly eradication pro-gram until the more recent dis-covery of a third compound—the sec-butyl ester—from the same source. The sec-butyl ester has not only replaced the first two com-pounds, but is now being used to replace Angelica-seed oil, a natural attractant, as a lure with which to bait some 50,000 traps distributed throughout Florida.

In working with any organic synthetics, every possible chemical variation of an attractive material is tried and tested before the material is discarded. Thus, in some cases, 100 or more different related compounds may be made in the effort to make certain that no compound is overlooked.

Most of these tests are made at USDA entomological research stations where there is opportunity to try out the attractants on different insects under field conditions. An example is the Fruit Fly Research Laboratory in Honolulu, Hawaii, where the Mediterranean fruit fly, the oriental fruit fly, and melon fly are common.

National Plant Food Institute Again Helping With Pennsylvania Leaflet

WASHINGTON—At the request of the Pennsylvania Bankers Assn., the National Plant Food Institute again will furnish for distribution through local banks during the coming year a leaflet promoting soil fertility and advocating the use of soil testing.

The leaflet was first prepared in the fall of 1956 by the bankers association in cooperation with the Pennsylvania State University College of Agriculture. It was published by National Plant Food Institute, and nearly 40,000 copies were distributed to Pennsylvania farmers through 130 cooperating banks during 1957. The bankers association plans distribution of a similar quantity during 1958.

This will be the fourth year in which the College, the bankers association and the National Plant Food Institute have conducted a cooperative educational program of this nature in Pennsylvania through local banks. Similar bankers' educational programs have been carried on by the Institute in 24 other states.

The first Pennsylvania project involved arrangements for an article authored by Dr. H. R. Albrecht, state director of extension, which was first published in 1953 in the Pennsylvania Bankers Assn. Bulletin. The article was entitled "Soil Tests, Bankers and Agricultural Wealth." As a result, the bankers association published an agricultural handbook for its membership covering all phases of farming including soil testing and use of fertilizer. The article also was reprinted and distributed widely.

This first venture was followed in 1955 by an advertising mat program. Under this program, which also has been used successfully in a number of other states, the Institute furnished mats of advertising layouts for the use of bankers in their local newspapers.

And the business-building promotion continues with 50 million ads in 37 farm papers during the next 8 months to keep Warfarin sold to the consumer as the *world's greatest rat and mouse killer!*

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INSECT AND PLANT DISEASE NOTES

Fall Armyworm On March in Illinois

URBANA, ILL.—Fall armyworm continues to increase on late-maturing field corn throughout Illinois. Heaviest infestations occur in the southwestern and western sections. In most infested fields, moths, egg masses, and worms from ¼ to 1½ inches long can be found. Egg counts as high as 4 per 20 plants were obtained, which should produce one or more worms per plant. Only occasional diseased or parasitized worms were observed, indicating that natural control is still low.

Infestations were highest on corn that has not tasseled. However, economic infestations were also observed on corn of medium-to-early maturity. On corn in silk, the worms are concentrating their feeding on the silks and in the developing ears. Once they enter the ear, it is too late for effective control.

This pest is expected to continue to reinfest late-maturing fields; and infestations, which are already high in many of these fields, will continue to increase.

Corn borer pupation (first generation) is complete. Moth emergence is nearing completion in northern Illinois. Egg-laying throughout the northern section remains low, but will continue for the next 10 to 14 days in this section. Although optimum time for treating second generation borer is past, some late-maturing fields where moths are concentrating their egg-laying may still benefit from treatment.

Green cloverworm is present in many soybean fields throughout the southern two-thirds of the state. Most of the worms are newly hatched, ¼ to ½ inch long, indicating that populations could increase rapidly during the next week or two. Some diseased and parasitized worms have been observed. These natural enemies are undoubtedly helping to keep this pest under control.—Steve Moore.

Cotton Pests Remain Active in Southwest

STATE COLLEGE, N.M.—Bollworms are generally heavy in cotton in Eddy, Chaves, Dona Ana, and Luna counties. They are causing severe damage in many fields. Control is hampered in most areas by scattered rains. Infestations in Hidalgo, Curry, Roosevelt, and Quay counties are generally light to medium with spotty heavy infestations.

Cotton leafworms are heavy in most cotton fields in Otero, Quay, and Hidalgo counties, and damage is severe in fields that haven't been treated. Heavy, spotty infestations are reported in Chaves, Eddy, Dona Ana, and Luna counties.

Cabbage Looper infestations are light to medium and spotty in most cotton-growing areas.

Spotted alfalfa aphids are generally light to medium throughout the state with scattered heavy infestations in Eddy and Chaves counties. Damage is very light in most areas. Infestations were found in Colfax and Union counties. These two counties have not reported infestations before this year. One light infestation was found in Colfax County. All fields checked in Union County had medium-to-heavy infestations.—John J. Durkin.

Iowa Corn Pests Still Need Spraying

AMES, IOWA—European corn borer moth emergence in Boone County reached 100% Aug. 23, with 92% of the first brood borers pupating. Thirty-two fields of various planting dates have now received an accumulative total of 138 egg masses per 100 plants. Very few new egg masses are expected during the remainder of the 1957 season. It may still be profitable to treat a few fields of late corn in the northern half of the state provided these fields show 100 unhatched egg masses per 100 plants.

Apple maggot in northern Iowa may still cause losses in winter apples, and red banded leaf roller pupae are present in orchards where they have not previously been controlled. These may yet damage winter apples.

Late second brood or partial third brood codling moth may still attempt entry in some orchards where previous control was poor. Unspotted tentiform leaf miner has severely damaged foliage in many orchards along the Missouri River.—Earl S. Raun.

Walnut Caterpillar Defoliates Texas Trees

COLLEGE STATION, TEXAS—The walnut caterpillar has been reported infesting pecans in several counties in South and Central Texas. The worms are generally found feeding on the pecan leaves during July and August.

The insect overwinters as a pupa from 3 to 6 inches beneath the surface of the soil in the vicinity of the tree on which it feeds, and emergence from the overwintering stage may extend from April to August.

Boll Weevil Damage Continues in Tennessee

KNOXVILLE, TENN.—Conditions for boll weevil damage in cotton producing counties of West Tennessee remain serious, R. P. Mullett, Tennessee extension entomologist, reported last week following a check by the State Department of Agriculture.

An average of infestation of 44% was noted in all the counties checked, and 60% in the southern counties, which was an increase above a check the previous week.

Counties indicating an increase in infestation include Hardeman, McNairy, Crockett, Lake, Obion and Dyer, according to Mr. Mullett.

Corn Pests Plentiful, Maryland Report Says

COLLEGE PARK, MD.—Earworms are heavy in sweet corn and late field corn, working in tassels as well as ears. Eggs can be found on the silks and many small worms are just entering. At canneries in Frederick County ear infestation is rather uniform averaging 27%. Queen Anne's County shows more variability—low to 88%—with about the same average. Field corn in Wicomico County, generally maturing, has a similar average of earworms. The crop prospect on the Shore has been too poor to warrant spraying.

European corn borers are generally light—4% ear infestation in Frederick County canneries. Eggs were found in 5 fields out of 9 examined. Leaf aphids are heavy.

Aphids continue harmful though most of them are concentrated in the tops of tobacco plants. Lady beetles and other enemies of the aphids are abundant. Control with aircraft has been generally good. In some areas, ground sprayers are at work, using malathion against aphids. No reports of hornworm trouble though moths are abundant at light traps.

Angoumois grain moth is heavy in cribs in Frederick and Wicomico counties. Old stocks should be disposed of or shelled and fumigated at once.

Euonymus scale is becoming very conspicuous with white insects on yellowed leaves. This pest can be controlled nicely by spraying with DDT or malathion when crawlers are active in May and July. Spray is less effective now.—Theo. L. Bissell and Wallace C. Harding, Jr.

Stored Grain Insects Begin Infestations

COLUMBIA, MO.—Farmers in Missouri are warned to check carefully for insects which infest stored grain. Fumigation is urged if such insects are present at this time of the year.

Fall armyworms continue to be a major problem on late corn and grain sorghums, and there is a scattering of green clover worms working in soybeans.

European corn borer is hitting corn extremely hard in the bootheel section of the state, and farmers are urged to use adequate methods of control both via aircraft and by ground rigs.

Numerous Pests Found In Wisconsin Crops

MADISON, WIS.—European corn borer pupation was 13.7% in Waupaca, Wood and Portage counties on Aug. 14. The first brood of borers appears to be more numerous than last year north of the three southern tiers of counties while in southern counties populations of the first brood were lighter. The proportion of the first brood which will pupate in counties above the three southern tiers may be limited by recent cooler weather but second brood moths have been present in fair numbers in most light trap collections and very abundant in others. Eggs deposited by female moths have been slower to hatch due to cooler temperatures. Treatments for control of second brood borers on canning sweet corn can be made simultaneously with corn earworm treatments.

Corn earworm moths continue to be caught in several light traps. Stevens Point reported the first moth was caught on Aug. 15. It is expected that the corn earworm will be on the increase from now on and treatments should be applied where protection is wanted.

Fall armyworm populations are scattered and larvae observed in Columbia County corn were mature. Many have pupated and moths are laying eggs for a new brood of larvae which invade ears of corn in a manner somewhat similar to corn earworm.

Northern corn rootworm adults have been observed feeding in corn silk and are very numerous in some fields. These light green, ¼ inch beetles will deposit eggs in the soil in corn fields this fall. The larvae which hatch next spring will be injurious to the roots of corn where corn follows corn, and cause "goose-necked" stalks.

A few adults of the southern corn rootworm, better known in Wisconsin as the spotted cucumber beetle, have also been observed in corn silks. Larvae of this insect also feed on roots of corn but the overwintering adults lay eggs in spring near the host.

While grasshoppers thus far have not caused extensive damage they are beginning to be more of a problem. It appears that the hatching of grasshopper eggs was quite uniform with a high rate of survival. Populations at present are quite high in legumes with counts up to 45 per square yard reported in several localities.

Only one observation of the disap-

(Continued on page 8)

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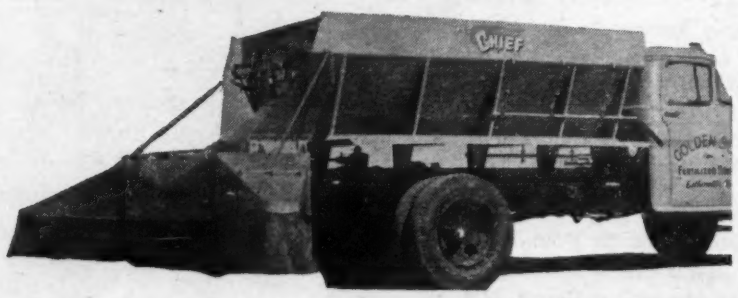

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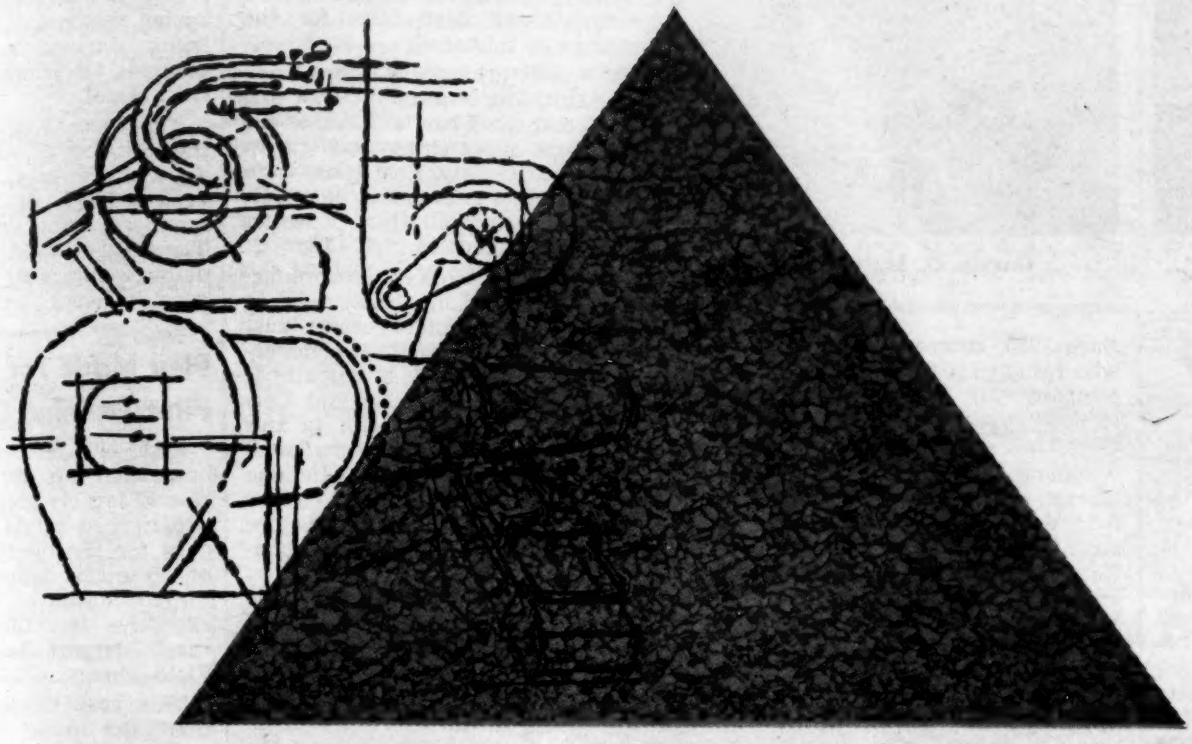

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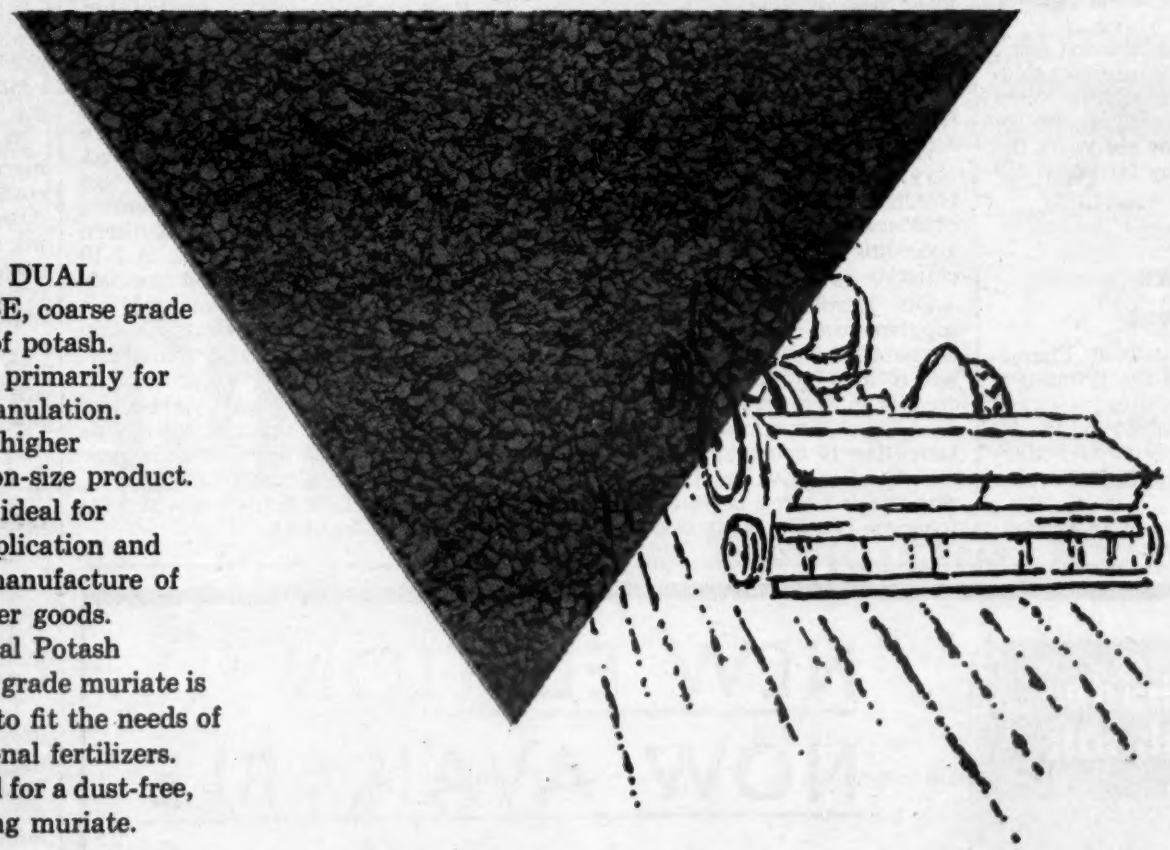

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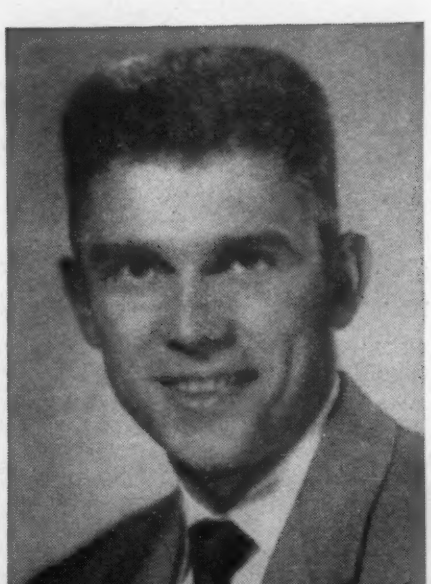


Garvin C. Matthiesen

Garvin C. Matthiesen, Ernest M. Harper in New Nitrogen Division Posts

NEW YORK—Garvin C. Matthiesen has been named assistant to the manager of fertilizer manufacturing sales by Nitrogen Division, Allied Chemical & Dye Corp. Ernest M. Harper succeeds Mr. Matthiesen as Midwest sales supervisor, direct application materials. Both men will be located at the company's main office in New York.

Mr. Matthiesen joined Nitrogen Division in 1953 after graduation from Iowa State College. Starting as a field sales representative, he was later made product sales supervisor for Procadian urea feed mixture, and was in 1955 promoted to the position he now leaves.

Mr. Harper has been Midwest product sales supervisor for nitrogen solutions. He is an honor graduate of the University of Illinois and taught vocational agriculture for six years before being employed by Nitrogen Division in 1953.

Dow Promotes Two In Sales Department

MIDLAND, MICH.—Dow Chemical Co. has announced the promotion of Eugene L. Martinez to manager of its Boston sales office and E. H. Killheffer, Jr., to succeed Mr. Martinez as manager of the Buffalo sales office.

Mr. Martinez, manager at Buffalo since 1955, succeeds A. A. Lawrence who resigned after 17 years with the company. Mr. Killheffer had served as head of magnesium sales with the New York office since 1948.

Joining the company in 1945, Mr. Martinez spent a year in solvents field work on the New York office staff and with the Washington office. He served nearly 10 years as a general chemicals salesman on the New York staff prior to his promotion to manager at Buffalo.

Mr. Killheffer started with Dow in 1943 and has devoted his entire career to magnesium sales. He spent his first two years in foundry contact activities with the New York office and the following three years in field work with the Boston office, returning to New York to become head of magnesium sales.

Irrigation Use Gains

AMHERST, MASS. — Supplementary irrigation is being put to more effective use by a growing number of Massachusetts farmers this year, according to a University of Massachusetts agronomy specialist.

Dr. Karol J. Kucinski, reported supplemental irrigation not only tides farmers over during short dry spells, but it also promotes impressive increases in per-acre crop yields, when used in conjunction with fertilizers. Irrigation is being applied to a wide variety of high-value crops in Massachusetts including corn, potatoes and tobacco, Dr. Kucinski said.

Wheat Rust Light But Still Continues To Threaten Crop

MINNEAPOLIS — Rust development on cereal grains in the Upper Midwest was light this year and overall losses will be negligible, a report by Donald G. Fletcher, executive secretary, Rust Prevention Assn., Minneapolis, reveals.

The North Dakota flax crop was reduced by 35-40% as a result of heat damage and attacks of aster yellows, a virus disease, which was widely distributed and destructive for the first time in this area.

The widely grown new durum varieties—Langdon, Ramsey, Towner and Yuma—withstood rust attacks, as did Selkirk, the most extensively grown bread wheat variety. Rust races were present in trace amounts however, which can attack all these varieties which are resistant to race 15B.

Future Upper Midwest oat production is threatened by the increase in distribution of virulent crown rust races, which can attack all commercial oat varieties and virtually all oat breeding lines, Mr. Fletcher said. Certain of these races, present in this region this year, caused severe losses to oats in southern Illinois, Indiana and portions of Iowa. Most Upper Midwest oat fields matured before crown rust caused appreciable damage.

Expansion of rust testing on the island of Puerto Rico is a must in view of the serious crown rust threat, Mr. Fletcher said. Several hundred wheat and oat breeding lines from the Upper Midwest were tested at Puerto Rico last winter where the island location permits testing varieties against rust races without endangering mainland cereal plantings.

Frequent, but unpredictable, changes in races of plant diseases and the sudden rise to prominence of diseases, such as aster yellows on flax this year, make research to control plant diseases and insect pests a never-ending battle, it was reported.

Harvest of wheat, oats, barley and rye, now underway from central South Dakota northward to southern Manitoba and Saskatchewan, is 7-10 days earlier than normal and unusually widespread, Mr. Fletcher said.

Excessively high temperatures during July hastened cereal crop maturity and reduced earlier excellent crop prospects. Bread wheat yields and test weights were reduced, but yields will still be well above the 10-year average in North and South Dakota, Mr. Fletcher said. Barley was severely damaged by heat.

Massachusetts Cranberry Growers to Harvest Early

BOSTON — Drouth, spring frost damage and unfavorable weather have cut the Massachusetts cranberry crop, and cranberry growers anticipate harvesting their crop some 15 days earlier than usual this year.

Even though this year's crop will be smaller, an estimated 520,000 barrels, there is more to the job of harvesting than local labor can handle. Some 157 Bahamians have been contracted to help.

Dry weather, starting in the spring, was responsible for the ground being warmed more quickly, thus bringing the vines into bloom earlier than usual.

The New England Crop Reporting Service of the Department of Agriculture said the 10-year average, 1946-55, of the Massachusetts cranberry crop was 560,600 barrels. The service said that spring frost damage this year was the most severe in recent years.

Plea Made for More Pilot Training Schools

FRESNO, CAL.—Crop dusting aircraft accidents during 1957 have been caused largely from two reasons: inexperienced pilots and too little regard for the ever-increasing potency of chemicals being sprayed. This is the conclusion of William D. Austin, executive secretary of the Agricultural Aircraft Assn., Inc., Chandler Field, Fresno.

This year there have been "more than the usual number of green pilots," Mr. Austin reports to the members of the association, and these pilots have had "less than the usual amount of training." This situation points up the urgency for setting up training schools, he said. Experienced pilots are retiring each year, without replacements to keep up in the growing industry.

Hundreds if not thousands of commercial pilots throughout the country could be induced to come into the industry, Mr. Austin believes, if training schools were set up. "We have received at least a hundred letters in recent months from pilots inquiring about training," he reports. "And we cannot depend on other states to furnish experienced pilots. Other states are trying to get pilots from California."

3 New Hampshire Counties Declared Disaster Areas

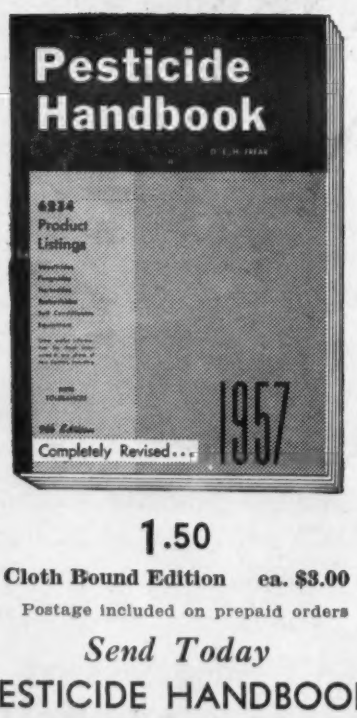
MILFORD, N.H.—Drouth stricken farmers in Hillsborough, Rockingham and Strafford Counties, New Hampshire, are eligible for emergency loans, since the three counties have been declared disaster areas.

Loans are available to farmers who have suffered drouth losses and need credit to continue their normal farming operations and who are unable to obtain loans through regular lending channels. The loans will bear 3% interest and may be used for the purchase of feed, seed, fertilizer and other essential farm and home operating expenses.

Repayment schedules will vary depending on the purpose for which the loans are made. Ordinarily these loans are scheduled for repayment in one to five years.

Republic Increases Copper Sulphate Facilities

NEW YORK—Republic Chemical Corp. here has announced that it has completed installation of increased facilities at its Baltimore plant for the production of instant powder copper sulphate. The firm said that the product is manufactured solely from copper refined at the plant in high temperature furnaces. It is packed in 50-lb. five-ply waterproof paper bags.



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about the editor —

Dr. Donald E. H. Frear, Editor of PESTICIDE HANDBOOK 1957, is one of the leading authorities on the chemistry of pesticides. He is the author of "Chemistry of Insecticides and Fungicides," the first book dealing with this subject published in the United States. In addition, he has written several other books, including "Chemistry of Insecticides, Fungicides and Herbicides." Dr. Frear is Professor of Agricultural and Biological Chemistry at the Pennsylvania State College.

Supplemental Irrigation in Eastern States Illustrates Its Value in 1957

WASHINGTON—Growing numbers of farmers along the East Coast—especially from North Carolina north to Massachusetts—are learning a dramatic lesson in 1957 about the value of supplemental irrigation, the U.S. Department of Agriculture says.

Supplemental irrigation is the practice of bringing water to crops during short to medium dry spells in humid regions. Rainfall along the East Coast—particularly in the region between the extreme ends of the coast—has been well below normal this year, causing considerable crop damage.

Irrigation in Delaware, Pennsylvania, and Connecticut are cases in point. In Delaware, irrigation systems numbered 124 at the start of the 1957 growing season, and it is reported that a number of additional farms were brought under irrigation when the drouth developed this year. The same thing happened in Connecticut where several new irrigation systems have been installed since the growing season started. Pennsylvania has already added 20,000 irrigated acres to its total of 17,000 reported for the most recent official irrigation census, made in 1954.

These experiences are being repeated up and down the coast where irrigation has grown enormously in popularity in the last few years.

The fact is, however, that supplemental irrigation is making a valuable contribution to farm prosperity in the area. Some of the facts on eastern irrigation are these:

1. There was a 70% increase in irrigated acreage in 28 selected eastern states between 1949 and 1954, according to the 1954-55 census. During the same years, the West's increase in irrigated acreage totaled 9%. A total of 546,000 acres was irrigated in the 28 eastern states in 1954. This figure makes a vivid contrast with the scant 39,000 acres irrigated in the same region during 1939.

2. Supplemental irrigation is becoming popular in states that have never known the more dramatic manifestations of aridity common to the West—such as dust storms and long-term drouth. For example, in 1954 the three leading states in the 28 state area in terms of irrigated acreage were Mississippi, with 151,772 acres irrigated, and New York and New Jersey with about 60,000 acres apiece.

3. Besides tiding the farmer over dry spells, supplemental irrigation used in conjunction with fertilizers has promoted dramatic increases in per-acre yields. It is especially valuable where intensive cropping is the rule as it is in the East. Consequently, irrigation is being applied to a wide variety of high-value crops. These include vegetables, tobacco, corn, citrus fruit, rice, Irish potatoes, cotton, berries and nuts. Even pasture has been aided profitably by irrigation. Six major crops—rice, Irish potatoes, pasture, corn, cotton and tobacco—account for three-fifths of the total irrigated acreage.

4. More acres of rice than any other crop are irrigated in the 28-state area and most of this is produced in Mississippi. New York grows nearly two-fifths of the irrigated Irish potatoes, and New Jersey is the largest single grower of irrigated tomatoes, with 5,000 acres. About a third of all irrigated tobacco is grown in North Carolina, but irrigated corn is not concentrated in any particular state.

5. Among eastern farmers the bulk of irrigation is confined to small acreages. Thirty-eight percent of the farmers irrigate fewer than 10 acres per farm, and another third irrigate from 20 to 99 acres. Only a few irrigate more than 100 acres.

Although the growth of irrigation has been spectacular in the 28 states studied, the total acreage is still only a fraction of the national total of close to 30 million acres. Arkansas, Louisiana and Florida, east of the Great Plains but not included in the 28 state study area, account for about 2 million acres. There are more than 27 million irrigated acres in 17 Great Plains and western states.

The East has a total of about 650,000 irrigated acres, according to the latest available figures. Total acreage irrigated in a humid region depends upon rainfall in a particular year. During wet years, farmers automatically cut down on the acreage irrigated.

Sources of water, distribution systems used and the costs of irrigation are variable depending upon a number of factors. About half the farmers in the 28-state region studied draw their water from rivers or streams, and about 5% get it from lakes or ponds. About 20% use springs and another 20% use wells. The remainder, located near large population centers in New York, New Jersey, Ohio and Massachusetts, tap municipal reservoirs.

Sprinklers are the most popular method of irrigating in the East. About four-fifths of all farmers use them to water more than two-thirds of the irrigated acreage. Between 5 and 10% use fixed overhead pipes, often in tandem with sprinklers. About 2% use portable gated pipe, 5% use ditches, and another 5%, chiefly rice farmers, practice flooding.

Average investment in these installations is $5,500 a farm. By states, though, the average investment ranges from $2,800 to $10,000 a farm. Average cost per acre in the region is $150, with a range by states of $65 to $500 an acre.

Total acreage irrigated has a marked effect upon cost. Farmers with fewer than 10 acres of irrigated land have an investment of close to $500 an acre, while those irrigating more than 100 acres are investing $90 an acre and less.

Cost figures include the purchase of sprinkler or other distribution equipment, drilling wells, constructing storage ponds, buying pipe or preparing land.

The 28 selected states on which these irrigation figures were compiled are: Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Delaware, Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Tennessee, Kentucky, West Virginia, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Missouri and Iowa.

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INSECT NOTES

(Continued from page 4)

pearance of a fairly large population of immature grasshoppers has been reported. During the past week only a very few mature grasshoppers which were parasitized or diseased were observed.

Black blister beetles are present in small numbers and are mating. Large numbers of these beetles appear in some fields having large grasshopper populations, but in general their population appears to be somewhat less than last year. Larvae of these beetles in the soil feed on eggs deposited by grasshoppers.

Red-legged grasshoppers are the dominant species in many of the legume fields of the state but adults of the migratory grasshopper are present in some areas and may be the dominant species in parts of northern Wisconsin. Red-legged grasshoppers are now becoming mature but observations indicate few of those with wings now contain eggs ready for deposition in southern counties. The same is true for adults of the large Carolina grasshopper. Fair populations of this latter grasshopper are present in some localities although it is not considered to be of much economic importance.

Two-striped grasshoppers and the grasshopper are present in fairly high populations in Adams, Marathon, Waushara and Portage counties. Few observations of the large differential grasshopper have been reported.—Wisconsin Cooperative Insect Survey.

Fall Insects Attack Crops in Kansas

MANHATTAN, KANSAS—Fall armyworm infestations continue to cause damage to late-planted corn and sorghums throughout most of the state. In earlier planted corn, these larvae are now doing some tunneling and shank feeding inside the stalks.

Infestations range from moderate to severe with some fields 100% infested. Larval counts in small corn range from 1 to 7 per stalk. All stages of development are found in the infested fields and the moth flight continues. To date very little feeding in sorghum heads has been observed or reported.

Corn earworm infestations in heads of sorghum plants are light this year when compared with previous years. Infestations in fields examined ranged from 4 to 16% with 1 to 2 larvae per infested head.

Light to moderate infestations of alfalfa plant bugs were found in several fields in Shawnee, Douglas and Johnson counties, east central. Counts ranged from 1 to 7 adults per net sweep.

Spotted alfalfa aphid populations continue a rather general increase throughout the state. Heaviest infestations are found in central and south central counties where some spraying for control has been reported. Predators vary as greatly as the aphid infestations. In the central area, fields have aphid counts of 35 to 600 per sweep.

This past week, infestations of varying degrees were found in all alfalfa fields surveyed in Marshall and Pottawatomie counties, northeast Johnson, Douglas, Shawnee and Osage, east central, and Wabaunsee, Morris, Dickinson and Geary, central area. Seedling plants should be repeatedly checked for aphid infestation and controls applied when needed.

Grasshopper populations are low in the east central area of the state than last year at this time. Threatening to severe infestations of crop feeding species were found in northern Marshall County, where counts of 7 to 18 per square yard have caused serious stripping of corn

New Hopper Surveys Underway in Wyoming

CHEYENNE, WYO. — Wyoming's 1957 grasshopper control program has been completed, and surveys already are underway to determine probable hopper infestations next year, Everett Spackman, state entomologist, has reported.

The entomologist said the 1957 aerial spraying program covered about 450,000 acres of rangeland which was considerably less than the 700,000 acres that had been anticipated last spring. He said the exact acreage covered by the 1957 program had not yet been determined because some of the spraying records had not yet been received at his office. Neither has the cost per acre been determined, although it has been estimated at 60¢.

"The kill in most areas was satisfactory," Mr. Spackman said, "and it is anticipated grasshoppers will not be present in economic numbers in those areas next year."

Minnesota Soil Group Plans Meeting

ST. PAUL—The Minnesota Group of the Middle West Soil Improvement Committee will meet Sept. 10 at the soils building on the St. Paul Campus of the University of Minnesota, M. W. Mawhinney, Smith-Douglass Co., Albert Lea, Minn., chairman, has announced. Principal topics for the session will be Minnesota's soil testing program and plans for a state nitrogen conference to be held next Feb. 20-22.

Pioneer Buys Fulton Plant at Kansas City

KANSAS CITY — Irvin E. Lincomb, chairman of the board, and Herb Greenberg, president of the Pioneer Bag Company of Kansas City, Inc., have announced the purchase by Pioneer of the bag plant of the Fulton Bag & Cotton Mills located in Kansas City.

CALIFORNIA BOTANIST RETIRES

SAN FRANCISCO—Mrs. Margaret K. Bellue, weed and seed botanist for the California department of agriculture, retired on Aug. 1. She had a record of 30 years of public service about 25 years of which have been with the State Department of Agriculture. Mrs. Bellue was on the staff of the College of Agriculture, University of California, Berkeley, for five years, and was a junior botanist in the seed laboratory for the U.S. Department of Agriculture, Washington, D.C. for another year.

SOIL CONSERVATIONIST DIES

WINCHESTER, KY.—William Avelar, a leader in soil conservation work before his retirement two years ago, died of a heart attack here in August. He had been on the U.S. Forest Service staff for 28 years.

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Top Green Pastures Contestants Use Fertilizer Wisely

DURHAM, N.H.—Proper use of fertilizers is a mark of efficient farming displayed by all three of the New Hampshire finalists in this year's New England Green Pastures contest. The three, all dairymen, are Malcolm Harrington, Laconia, John H. Morrill & Son, Penacook, and Fred M. Putnam, Claremont.

Mr. Harrington operates a typical upland farm of 177 tillable acres and impressed the judges with the amount of farm output with a minimum of labor, 23 months of hired work in addition to his own.

Basing his cropping on clover and alfalfa, Mr. Harrington rotates seven pastures ranging from six to 10 acres each and utilizes two night pastures near his basement-type barn. He has a mixed herd of 40 cows, 12 calves, 18 young stock and a bull.

Mr. Harrington expects to make 3,000 bales of hay this year, 4,500 were realized from the first cutting.

On Dairy Herd Improvement Assn. test, Mr. Harrington's herd of 34 milkers last year gave 277,000 lb. of milk. Grain to milk ratio is one to five in summer and one to three and one-half in winter. The dairyman fertilizes liberally using 8-16-16 and 0-15-30, uses superphosphate in conjunction with manure and spread 40 tons of lime both this year and last.

Outstanding for forage production over and above farm needs is the Morrill operation of 349 acres, pastured or cropped, and 200 acres of woodland. The farmer milks 47 cows and maintains 18 calves, 25 young stock, three bulls and a steer. Thirty-eight man months of labor are hired.

All manure produced on the farm is included in the fertilization program in addition to 200-300 tons of poultry litter which is spread on the corn land. This year Mr. Morrill put 93 tons of lime on his land, 36 tons of 8-16-16, 10 tons of 10-10-10 and four tons of nitrogen fertilizer.

He has 40 acres of new seedings, 100 acres of rye and millet, 75 acres of corn silage and grain and 124 acres of hay crops and new seedings.

The Morrill farm includes some upland soil and Merrimack River land and Mr. Morrill is carrying on a corn silage and hay program. He harvests 250 tons of hay and sells 150 tons. In all 10,000 bales are put up. The Holsteins produced 500,890 lb. of milk last year, averaging 10,490 lb. of milk and 400 of fat per cow.

Mr. Putnam has worked his 125 acre hillside farm for only three years. He has 31 Holstein cows, five cows and 12 young stock. Last year the milkers averaged 11,220 lb. of milk and 400 of butterfat on D.H.I.A. test. Grain to milk ratio is one to five in summer, one to four and one-half in winter. Production of 325,000 lb. of milk is anticipated for 1957.

On Mr. Putnam's 120 acres in pastures and crops he grows 50 acres of legumes, 15 acres of grass, 16 of corn silage and has 19 new seedings using oats as a nurse crop. This year he baled 100 tons of hay and harvested 250 tons of silage and on a yearly basis hires six months of labor.

New seedings got 30 tons of lime and legume mixtures were treated to liberal applications of 0-15-30. Grass and new seedings received 10-10-10 and 8-16-16 respectively.

Individuality in Retail Advertising

By JEAN C. HALTERMAN, Assistant Professor, and BERT C. McCAMMON, Lecturer, Marketing Department, School of Business, Indiana University, Bloomington, Ind.*

The effectiveness of a retail store's advertising often can be increased by having it reflect a distinctiveness which is in keeping with the personality of the store. This individuality can (1) make a small advertisement more attractive and thus increase its attention value, even among larger advertisements; (2) provide a continuity in the advertising effort by tying together advertisements appearing in different places and at different times; (3) help to build a well-known personality for the small store, contributing to greater customer loyalty; and (4) result in increased returns from the dollars invested in advertising. Individuality can be reflected in the copy approach, the presentation, the schedule, the layout, the art, or by a combination of various distinctive advertising techniques. The individuality, however, should be in good taste, should be in harmony with the desired personality of the store, and should appeal to the largest cross-section of potential customers.

Among the advertising media used by small retailers are newspapers, direct mail, magazines, telephone solicitations, and house-to-house handbills. Many retailers make successful and distinctive use of their local radio stations. Many like to use television. Some specialize in outdoor posters. Others favor transit-car cards. Individuality can be developed in all of them. Typically, however, the average small retailer thinks first in terms of how to individualize his message in newspapers, radio, and direct mail advertising.

PERSONALITY FOR A STORE: Why do customers buy from one store rather than another? The list of motives is long: Advertising, credit, personal salesmanship, attractive facilities, reasonable prices, assortment of merchandise, ease of parking—even habit. Whatever the reasons, over the long run customers put a given store's features together and create in their minds a kind of personality for that store.

Some shops, for example, are looked upon as "friendly," some "modern," or "old-fashioned," or "exotic," or just "ordinary." In the case of any store a positive and distinct personality should evolve. It is meaningful to the customer in deciding where to shop, and important to the dealer in making sales. Advertising can help to develop this distinct personality.

Beware of tricks, however. A dealer can make his advertising distinctive with "gimmicks," such as an upside-down insertion in the newspaper. Nevertheless, the kind of distinctiveness that pays is the kind that tells the sales story better, and at the same time draws attention. Worthwhile individuality in retail advertising, then, should help customers recognize and remember the appropriate personality of a store.

DETERMINING THE PROPER APPROACH: To develop individuality, a clear understanding of the goal is of special value. It is necessary to plan carefully, watch what others are doing, check results, experiment. As a guide in working out the proper approach, here are four key points suggested by successful small retailers.

Size Up Your Customers: Study what kinds of people the customers are. Observe what they look for when they buy. Try to discover what the store offers that they like. Watch carefully what products are selling and which ones stay on the shelves. Ask people if they've seen the "ad" in the newspaper. Learn what attracts them in spoken as well as visual advertising.

Most customers will be flattered to have such interest shown in them. As a result, plenty of helpful suggestions on what products to push, what appeals to use, and how to advertise to achieve strong individuality will be received.

Appeal to Logical Customers: It is seldom possible to be all things to all people. Therefore, concentrate advertising efforts on people who are the most logical prospects. A retailer of sporting goods, for example, might feature bold type faces, pictures of

(Continued on page 14)

*This article is adapted from a marketing aid publication of the Small Business Administration, Washington, D.C.

SHOP TALK OVER THE COUNTER

By Emmet J. Hoffman
Croplife Marketing Editor

A dealer was discussing the merits of his employee training program with several of his business associates. He cited a graphic illustration of the need for such training, even if the retail firm has only two or three employees.

Suppose, he said, that a dealer had an efficient young employee who worked for him prior to entering the military service in 1947. Following military service, the former employee tried several other jobs but, after a 10-year lapse, returned to his old employer, asked for and got back his old job. Would the returned employee find that things have changed in the fertilizer and agricultural chemical business?

The answer, of course, is obvious.

"An awful lot of things have happened since that lad went into the Army," commented the dealer. "We've learned a lot about fertilizers in the last 10 years. There have been tremendous advances made in insecticides and pesticides and their uses. A fellow who has been out of touch with the business for 10 years just isn't qualified to sell farm chemicals. That's why I have regular sessions with my help in which we discuss our products and our sales policy."

No salesman should misrepresent his products and neither should he misrepresent his employer's sales policy. If he does, he is need of training or retraining, if he is an experienced employee. The sales staff needs to be fully informed about the products it sells so that it can do an intelligent job of selling and of informing the farmer, the rancher, the gardener and the home owner.

Employees do the bulk of contact work with the farm store's customers. If sales training will help them do a better job of selling and serving customers then a training program is in order.

In his sales training the dealer can question the employee now and then to find out how much of the training he has absorbed, and if retraining is needed. It is the dealer's responsibility to himself and to the employee to train him in how to make the most of his job—to give him the merchandising and service knowledge with which to work.

One convention speaker said about sales training, "And among the people necessary to the profitable conduct of your store, are the sales people you employ. They need

(Continued on page 15)

Changes Planned in Green Pastures Contest

BOSTON—Plans for a "new" New England Green Pastures contest with more emphasis on harvesting, storage and feeding of forage on the region's dairy farms are being laid by a New England-wide long-range planning committee.

Robert P. Davison, director of the Agricultural Extension Service at the University of Vermont, has been named chairman of the planning committee, according to Harry R. Mitiguy, agricultural economist for the Federal Reserve Bank in Boston and chairman of the Green Pastures Committee.

As in the past nine years, the 1958 and future Green Pastures programs will continue to emphasize the economical year-round production and utilization of forage crops, Mr. Mitiguy said. But the emphasis in the educational program, which Green Pastures essentially is, he says, will shift more toward proper harvesting, storage and utilization of the forage.

Soil Scientist Retiring

AMHERST, MASS.—John N. Everson, University of Massachusetts, is retiring after 21 years of teaching agronomy at the College of Agriculture. A graduate of the University, class of 1910, (then known as Massachusetts Agricultural College) Mr. Everson has been prominent in the field of soil science. For 23 years he worked as an industrial chemist beginning with the Central of Georgia Railway. After graduate study, he was appointed to the university teaching staff in 1936. In 1946, he taught at the University of Florence, Italy. His chief work in research has been studies of mineral weathering to form soil.

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Harrington expects to make les of hay this year, 4,500 lized from the first cutting.

Dairy Herd Improvement st, Mr. Harrington's herd of ers last year gave 277,000 lb. . Grain to milk ratio is one in summer and one to three e-half in winter. The dairy- rtilizes liberally using 8-16- 0-15-30, uses superphos- n conjunction with manure ead 40 tons of lime both this d last.

nding for forage production l above farm needs is the peration of 349 acres, pas- cropped, and 200 acres of l. The farmer milks 47 cows ntains 18 calves, 25 young ree bulls and a steer. Thirty- n months of labor are hired.

anure produced on the farm ded in the fertilization pro- addition to 200-300 tons of litter which is spread on n land. This year Mr. Mor- 93 tons of lime on his land, of 8-16-16, 10 tons of 10-10-10 r tons of nitrogen fertilizer.

s 40 acres of new seedings, s of rye and millet, 75 acres ilage and grain and 124 acres rops and new seedings.

orrill farm includes some up- and Merrimack River land Morrill is carrying on a corn d hay program. He harvests of hay and sells 150 tons. In 00 bales are put up. The s produced 500,890 lb. of milk , averaging 10,490 lb. of milk of fat per cow.

utnam has worked his 125 lside farm for only three e has 31 Holstein cows, five l 12 young stock. Last year kers averaged 11,220 lb. of 400 of butterfat on D.H.I.A. ain to milk ratio is one to ummer, one to four and one- vinter. Production of 325,000 lk is anticipated for 1957.

. Putnam's 120 acres in pas- d crops he grows 50 acres of 15 acres of grass, 16 of corn nd has 19 new seedings using a nurse crop. This year he 0 tons of hay and harvested of silage and on a yearly es six months of labor.

seedings got 30 tons of lime me mixtures were treated to pplications of 0-15-30. Grass seedings received 10-10-10 -16 respectively.

Individuality in Retail Advertising

By JEAN C. HALTERMAN, Assistant Professor, and BERT C. McCAMMON, Lecturer, Marketing Department, School of Business, Indiana University, Bloomington, Ind.*

The effectiveness of a retail store's advertising often can be increased by having it reflect a distinctiveness which is in keeping with the personality of the store. This individuality can (1) make a small advertisement more attractive and thus increase its attention value, even among larger advertisements; (2) provide a continuity in the advertising effort by tying together advertisements appearing in different places and at different times; (3) help to build a well-known personality for the small store, contributing to greater customer loyalty; and (4) result in increased returns from the dollars invested in advertising. Individuality can be reflected in the copy approach, the presentation, the schedule, the layout, the art, or by a combination of various distinctive advertising techniques. The individuality, however, should be in good taste, should be in harmony with the desired personality of the store, and should appeal to the largest cross-section of potential customers.

SHOP TALK

OVER THE COUNTER

By Emmet J. Hoffman
Croplife Marketing Editor

A dealer was discussing the merits of his employee training program with several of his business associates. He cited a graphic illustration of the need for such training, even if the retail firm has only two or three employees.

Suppose, he said, that a dealer had an efficient young employee who worked for him prior to entering the military service in 1947. Following military service, the former employee tried several other jobs but, after a 10-year lapse, returned to his old employer, asked for and got back his old job. Would the returned employee find that things have changed in the fertilizer and agricultural chemical business?

The answer, of course, is obvious.

"An awful lot of things have happened since that lad went into the Army," commented the dealer. "We've learned a lot about fertilizers in the last 10 years. There have been tremendous advances made in insecticides and pesticides and their uses. A fellow who has been out of touch with the business for 10 years just isn't qualified to sell farm chemicals. That's why I have regular sessions with my help in which we discuss our products and our sales policy."

No salesman should misrepresent his products and neither should he misrepresent his employer's sales policy. If he does, he is need of training or retraining, if he is an experienced employee. The sales staff needs to be fully informed about the products it sells so that it can do an intelligent job of selling and of informing the farmer, the rancher, the gardener and the home owner.

Employees do the bulk of contact work with the farm store's customers. If sales training will help them do a better job of selling and serving customers then a training program is in order.

In his sales training the dealer can question the employee now and then to find out how much of the training he has absorbed, and if retraining is needed. It is the dealer's responsibility to himself and to the employee to train him in how to make the most of his job—to give him the merchandising and service knowledge with which to work.

One convention speaker said about sales training, "And among the people necessary to the profitable conduct of your store, are the sales people you employ. They need

(Continued on page 15)

Changes Planned in Green Pastures Contest

BOSTON—Plans for a "new" New England Green Pastures contest with more emphasis on harvesting, storage and feeding of forage on the region's dairy farms are being laid by a New England-wide long-range planning committee.

Robert P. Davison, director of the Agricultural Extension Service at the University of Vermont, has been named chairman of the planning committee, according to Harry R. Mitiguy, agricultural economist for the Federal Reserve Bank in Boston and chairman of the Green Pastures Committee.

As in the past nine years, the 1958 and future Green Pastures programs will continue to emphasize the economical year-round production and utilization of forage crops, Mr. Mitiguy said. But the emphasis in the educational program, which Green Pastures essentially is, he says, will shift more toward proper harvesting, storage and utilization of the forage.

Soil Scientist Retiring

AMHERST, MASS.—John N. Everson, University of Massachusetts, is retiring after 21 years of teaching agronomy at the College of Agriculture. A graduate of the University, class of 1910, (then known as Massachusetts Agricultural College) Mr. Everson has been prominent in the field of soil science. For 23 years he worked as an industrial chemist beginning with the Central of Georgia Railway. After graduate study, he was appointed to the university teaching staff in 1936. In 1946, he taught at the University of Florence, Italy. His chief work in research has been studies of mineral weathering to form soil.

Among the advertising media used by small retailers are newspapers, direct mail, magazines, telephone solicitations, and house-to-house handbills. Many retailers make successful and distinctive use of their local radio stations. Many like to use television. Some specialize in outdoor posters. Others favor transit-car cards. Individuality can be developed in all of them. Typically, however, the average small retailer thinks first in terms of how to individualize his message in newspapers, radio, and direct mail advertising.

PERSONALITY FOR A STORE: Why do customers buy from one store rather than another? The list of motives is long: Advertising, credit, personal salesmanship, attractive facilities, reasonable prices, assortment of merchandise, ease of parking—even habit. Whatever the reasons, over the long run customers put a given store's features together and create in their minds a kind of personality for that store.

Some shops, for example, are looked upon as "friendly," some "modern," or "old-fashioned," or "exotic," or just "ordinary." In the case of any store a positive and distinct personality should evolve. It is meaningful to the customer in deciding where to shop, and important to the dealer in making sales. Advertising can help to develop this distinct personality.

Beware of tricks, however. A dealer can make his advertising distinctive with "gimmicks," such as an upside-down insertion in the newspaper. Nevertheless, the kind of distinctiveness that pays is the kind that tells the sales story better, and at the same time draws attention. Worthwhile individuality in retail advertising, then, should help customers recognize and remember the appropriate personality of a store.

DETERMINING THE PROPER APPROACH: To develop individuality, a clear understanding of the goal is of special value. It is necessary to plan carefully, watch what others are doing, check results, experiment. As a guide in working out the proper approach, here are four key points suggested by successful small retailers.

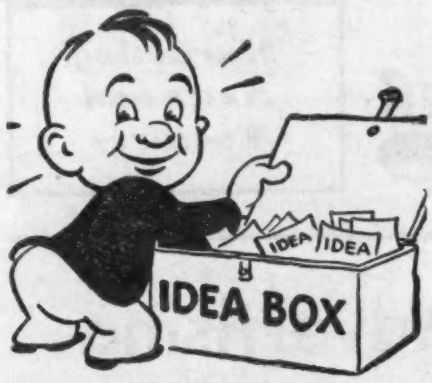
Size Up Your Customers: Study what kinds of people the customers are. Observe what they look for when they buy. Try to discover what the store offers that they like. Watch carefully what products are selling and which ones stay on the shelves. Ask people if they've seen the "ad" in the newspaper. Learn what attracts them in spoken as well as visual advertising.

Most customers will be flattered to have such interest shown in them. As a result, plenty of helpful suggestions on what products to push, what appeals to use, and how to advertise to achieve strong individuality will be received.

Appeal to Logical Customers: It is seldom possible to be all things to all people. Therefore, concentrate advertising efforts on people who are the most logical prospects. A retailer of sporting goods, for example, might feature bold type faces, pictures of

(Continued on page 14)

*This article is adapted from a marketing aid publication of the Small Business Administration, Washington, D.C.



What's New...

In Products, Services, Literature

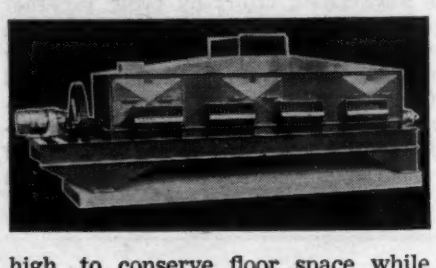
You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6621—Skin Protectant

A new skin protective coating, called by the trade name, Ply No. 9 Gel, has been announced by the Milburn Co. It is claimed to be particularly useful to workers in fertilizer and farm chemical processing work. The product is soluble in water but is impervious to phenols, hexanes, coal tars, dry and oil-based insecticides, weed killers and crop dusts, to poison oak and poison ivy and to most organic solvents. To secure details check No. 6621 on the coupon and mail it to Croplife.

No. 5754—Bulletin On Dryers

The Anderson 72-tube rotary steam dryer for adjusting moisture content of chemicals, minerals and other nonsticky granular materials is described in a new bulletin No. 457 published by the V. D. Anderson Co. The four-page bulletin also describes in detail how material flows through the dryer. A cutaway illustration pictorially shows the unique steam flow through the steam head and tube reel. Specifications including shipping weights, dimensions and accessory equipment also are listed, as well as methods for stacking the units two and three



high, to conserve floor space while increasing processing capacity. Secure the bulletin by checking No. 5754 on the coupon.

No. 6622—Insect Control

A chart on home insect control has been prepared by the Real-Kill Co., division of the Cook Chemical Co. The chart is available without charge. Nineteen insects ordinarily found in the home are listed, together with recommended methods of control. The chart is suitable for wall or desk top use. Check No. 6622 on the coupon and mail it to secure the chart.

No. 6623—Multi-Purpose Valves

The RegO Division of the Bastian-Blessing Co. has announced two new multi-purpose valves for use on anhydrous ammonia field storage and nurse tanks. Company officials said that "design features of the new valves include an exclusive V-ring pressure seal on a stainless steel stem, positive shut-off, extra large openings to reduce pressure drop and rugged ductile iron bodies. A side boss is provided which can be tapped ¼ inch NPT for installation of vent valve, hydrostatic relief valve or plug. An excess flow valve at the inlet will prevent escape of gas in case the hose is ruptured or the connection is otherwise broken." Secure details by checking No. 6623 on the coupon and mailing it to Croplife.

No. 6624—Peanut Weed Control Movie

A new 5-min., 16 mm., full-color sound movie, showing how to control weeds in peanut rows with Crag Sesone, formerly called Crag Herbicide-1, has been released by Carbide & Carbon Chemicals Co., a division of Union Carbide & Carbon Corp. The film shows how to prepare the weed control spray and calibrate the sprayer. Information on how to secure the movie may be secured by checking No. 6624 on the coupon and mailing it to Croplife.

No. 6625—Surface Active Agents

A new "J" series has been added to the Poly-Tergent line of nonionic surface active agents introduced earlier this year by the industrial chemicals division of the Olin Mathieson Chemical Corp. Officials state that "an outstanding characteristic of the new series is the wide temperature range over which the products are effective." The range extends from 0 to 100° C. (-32 to 212 degrees F.), it is claimed. One member of the series, Poly-Tergent J-500, can be used at the boiling point of water without serious loss of its surfactant properties. All members of the series are said to be good wetters, detergents and dispersants. For details check No. 6625 on the coupon and mail it.

self-contained and factory assembled company officials say. The unit was developed primarily for B&L batch type neutral solution fertilizer processing plants. It may be used also to convert manually operated plants to automatic operation. Complete information on the equipment and neutral solution liquid fertilizer processing is available by checking No. 6616 on the coupon and mailing it to Croplife.

No. 6619—Miticide

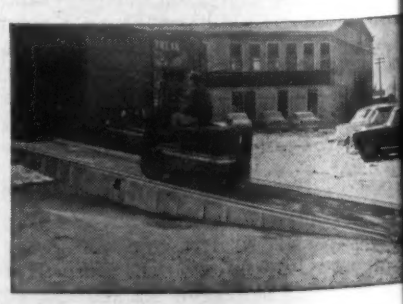
A technical service bulletin titled Chipman 6199, which is also the trade name of a miticide and scalicide, has been prepared by the Chipman Chemical Co., Inc. The bulletin describes the product's use on non-bearing citrus. The product is described as "a granular, non-dusty, organic phosphorus compound—readily soluble in water for spray applications." It contains a bright violet dye so that accidental spillage can be easily detected. Secure the bulletin by checking No. 6619 on the coupon and mailing it to Croplife.

No. 6617—Gopher Control

Cooke Laboratory Products has available literature on its product known as Gopher Tabs. The literature states that University of California field demonstrations with field and forage crop producers, vegetable and flower growers and home gardeners show excellent kill results. The product contains .6% strychnine alkaloid. Check No. 6617 on the coupon to secure the literature.

No. 5725—Yard Ramp

The Lite-Line Metal Industries of Copperloy Corp. has introduced a new, magnesium, yard ramp. This portable ramp permits freight car and truck loading where permanent dock facilities are not available or where existing facilities are overtaxed, or where special loading problems necessitate a portable dock. The ramp makes use of magnesium com-



bined with a carefully engineered structural design to make it light and easily portable. One man can move and position the ramp, which is 30 ft. long and is available in four models, from 6,000 to 16,000 lb. capacity. Secure complete details by checking No. 5725 on the coupon and mailing it to this publication.

No. 5757—Seed Treatment Booklet

"The Benefits of Modern Seed Treatment" is the title of a new 16-page booklet published by Panogen Inc. According to the company, material in the booklet has been select-

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6616—Automatic Control Unit

A new, completely automatic control unit for batch-type processing of neutral solution liquid fertilizers has been introduced by the Barnard & Leas Mfg. Co., Inc. The "B&L Autobatch" is designed to meter phosphoric acid, aqua ammonia or other suitable nitrogen solutions, and water in pre-selected amounts and deliver them simultaneously to an auxiliary batch-mixing unit. It is completely

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☐ No. 6600—Spray Tolerances	☐ No. 6624—Movie
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CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

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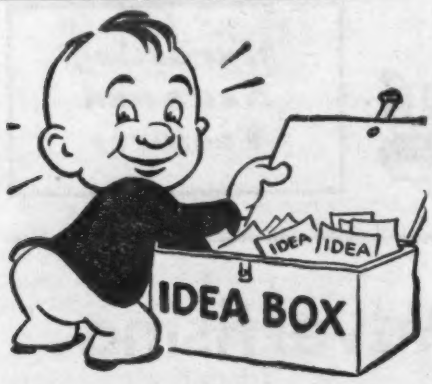

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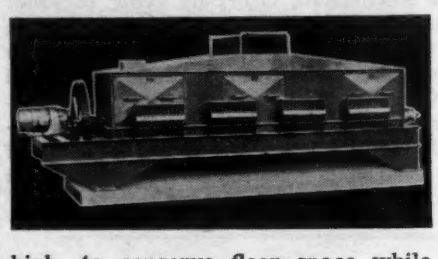

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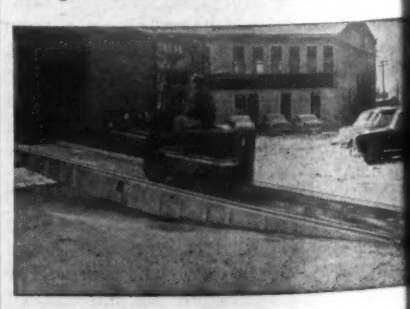

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CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

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P. O. Box 67

Reader Service Dept. Minneapolis 1, Minn.

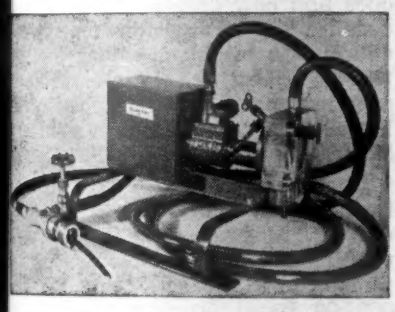
d and checked by extension patholo-ists and is designed to be "easy to ead and nontechnical." "Seed treat-ent benefits are sometimes misun-erstood and many farmers do not ecognize the crop benefits and profits volved," the company adds. Con-nts include sections on: When does pay to treat seed?, history of seed reatment, how seed treatment works, apor action, reasons for treating heat, oats, barley, flax, cotton and ther crops, and how to treat seeds. early 50 photos are included. Secure he booklet by checking No. 5757 on he coupon and mailing it to this pub-cation.

No. 5765—Self-Dumping Hopper

A new self-dumping hopper 30 in. ide, designed for handling bulk ma-erials through narrow aisles and in onfined areas, is available from Rou-a Iron Works, Inc. The hopper has capacity of 10 cu. ft. and is mount-d on three casters, permitting manu-l or truck fork handling. The self-umping action is triggered when the perator releases a locking handle on he rear of the hopper. The hopper s of heavy steel plate, weighs 450 b. empty, is 49 in. long and is 40 in. igh. The 30-in. width is standard ut narrower widths are also avail-ble. Details will be sent upon request. heck No. 5765 on the coupon and ail it to this publication.

No. 6618—Injector

Literature concerning the Arcadia njector model 4575 for the injection f fertilizers into sprinkler irrigation ystems has been prepared by the rcadia Pump Manufacturing Co. The ystem is powered by irrigation pres-ure. One ¾-in. pipe opening is need-d to connect with the injector. The



unit is said to be light, compact and easy to operate, and includes a plastic fertilizer suction hose and power and injector hoses ready to operate. The line of flow of fertilizer through the injector has no effect on the working parts of the pump. The fertilizer capacity is one of 45 gal. per hour. Recommended water pressure is from 35 to 150 p.s.i. The shipping weight is 18 lb. For details check No. 6618 on the coupon and mail it to Croplife.

No. 5769—Portable Conveyors

The Chantland Manufacturing Co. announces improvements in three lines of its Elton portable conveyors. The conveyors are now equipped with new lifts which allow the receiving end to be adjustable from minimum height to 3 ft., 9 in. above the ground. Company officials say that this feature is ideal for loading or unloading trucks or freight cars or for use in conveyor lines. It also allows horizontal conveying at the desired height. Descriptive literature on this, and other features, is available. Check No. 5769 on the coupon and mail it to this publication.

No. 5770—Weighing Machine

A new automatic net weighing machine, designed for use in restricted overhead clearance areas, has been announced by the Exact Weight Scale Co. The machine consists of an even balance precision industrial scale, an air operated slide valve, a controller and remote control station. The remote control station permits the machine to be operated as a fully automatic or semi-automatic. The weight

bucket (on the machine illustrated) is capable of holding 1,500 cu. in. of product. Various sizes of weigh hoppers are available. Secure details by checking No. 5770 on the coupon and mailing it to this publication.

No. 6600—Spray Tolerances

United-Heckathorn is offering, free of charge, a wallet size folder containing a list of agricultural chemical spray tolerances giving the time limitation in days before harvest on various crops. The folder is in condensed form from information provided by the U.S. Department of Agriculture. To secure the folder check No. 6600 on the coupon and mail it to Croplife.

No. 5774—Equipment Catalog

The Burrows Equipment Co. has published its 1957-58 equipment catalog which describes, illustrates and prices some 1,000 different items of equipment used in the handling, storing, processing and marketing of feed, grain, seed and related materials. The 200-page catalog is available without charge. Check No. 5774 on the coupon and mail it to this publication.

No. 6620—Tank Brochure

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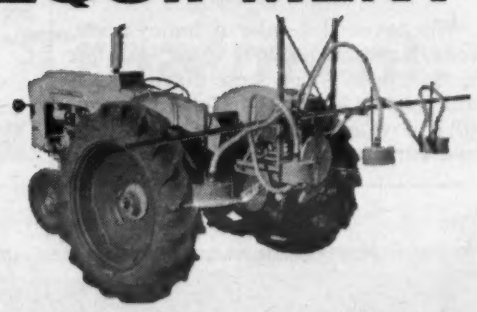

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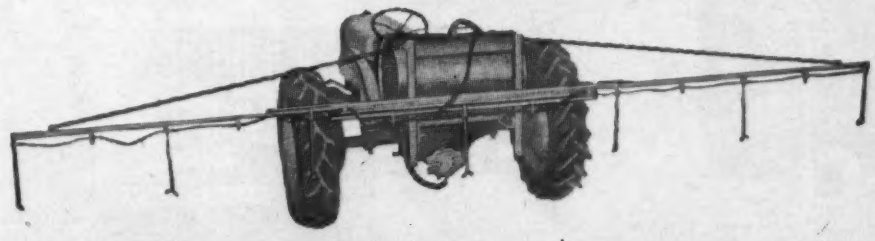

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Dependable Farm Equipment Since 1886

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is designed to be "easy to
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self-dumping hopper 30 in.
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618—Injector

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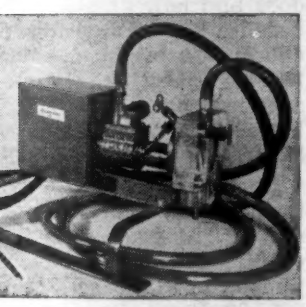

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769—Portable eyors

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improvements in three
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semi-automatic. The weight

bucket (on the machine illustrated) is capable of holding 1,500 cu. in. of product. Various sizes of weigh hoppers are available. Secure details by checking No. 5770 on the coupon and mailing it to this publication.

No. 6600—Spray Tolerances

United-Heckathorn is offering, free of charge, a wallet size folder containing a list of agricultural chemical spray tolerances giving the time limitation in days before harvest on various crops. The folder is in condensed form from information provided by the U.S. Department of Agriculture. To secure the folder check No. 6600 on the coupon and mail it to Croplife.

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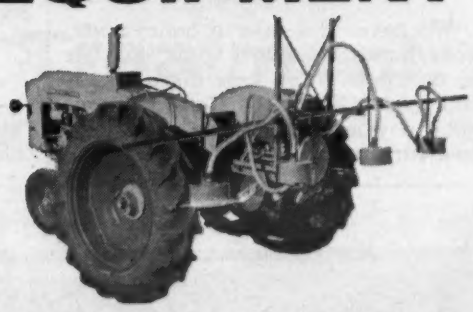

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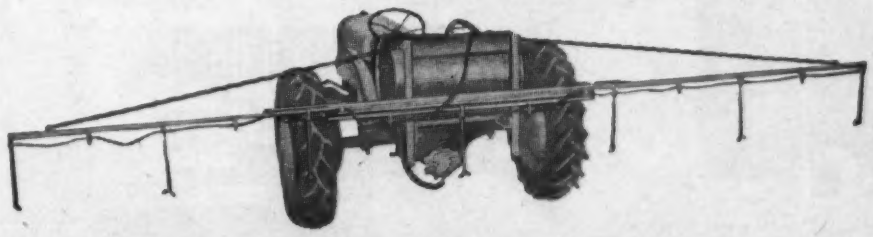

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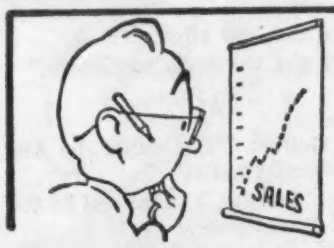

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"Ach, you are talking foolish like Pat," muttered her husband still at the window. "A honeymoon after 21 years? What good is that?"

"It means a lot to me," Minnie said slowly. "At the Ladies Aid sometimes, the women talk about their husbands and their honeymoons and where they spent them. I never tell them. How can I say I spent my honeymoon at home and working days at the hotel in the kitchen?"

"And lots of those ladies have husbands that are in debt," Oscar exclaimed. He came and stood at the end of the bed in the dark, the accordion now putting forth with a dreamy waltz. "I know. I am on the board of directors at the bank. They don't want me, but I am there. I look at the loan applications. I always say no. I know what people owe. And some are in the church, too."

"Couldn't we take a honeymoon, even if it's only down to the county seat, Oscar?" Minnie said desperately.

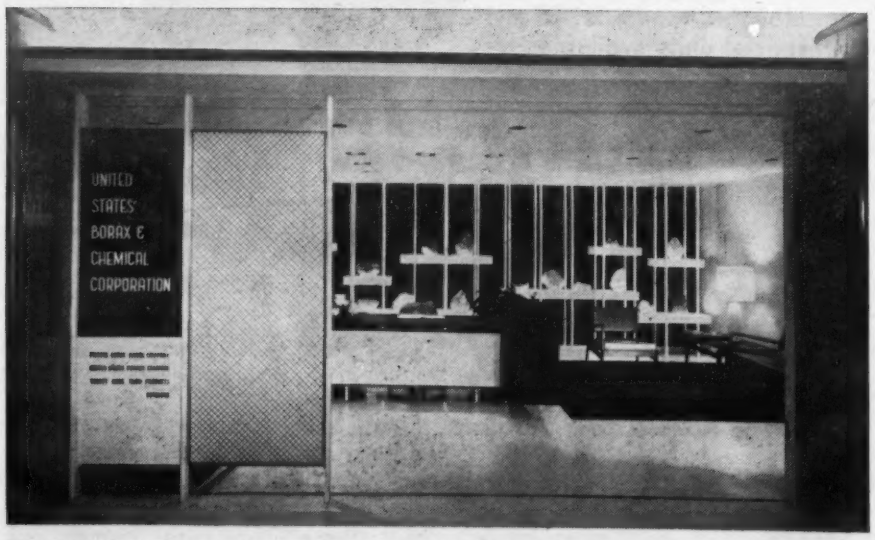
"Honeymoon," Oscar said peevishly. "Some people are on a honeymoon all their lives, and, ach, they are in trouble because of it. Some of these farmers spend and spend and then can't pay us for fertilizer. They think they are still on a honeymoon. One of these days I will sue some of them."

"It would only cost $30 maybe," Minnie persisted in a low voice. "I could use my raspberry money. We had a good crop and I picked lots of them and delivered them. Just one night in a nice hotel, and a dinner in a place with music, and then maybe a show after—and, and popcorn."

"Minnie!" Oscar reprimanded sharply. "Ach, do not think of spending your money so foolishly. Give the $30 to me. I can put it in the building and loan for you at 4%. You will make $1.20 a year. Yah, that is better."

The accordion music grew louder and the singing more boisterous. Oscar swore in German. "Ach, I will have to take the spare bedroom, Minnie. I can't stand it in here on Rudolph's house side. I'll put cotton in my ears, then maybe I won't hear that music. That Rudolph, I will tell him a piece of my mind when I see him. Good night, Minnie."

But Minnie did not hear him as he closed the door and proceeded down the hall to the spare bedroom. She was crying bitterly into her pillow, something she had been doing for many years.



NEW OFFICES—United States Borax & Chemical Corp. has announced that it has moved its combined offices to 50 Rockefeller Plaza in New York. The company will occupy all of the eighth floor and about one-half of the ninth floor. The space being used will be the headquarters of the two principal divisions of the corporation, Pacific Coast Borax Co. and United States Potash Co. divisions, and it will also serve as the eastern headquarters of the 20 Mule Team Products Division. The offices have been completely air-conditioned and redecorated by Maria Bergson Associates, New York City. Several of the permanent features of the new offices include an illuminated display of borate and potash ores in the main lobby and a large combined conference and board of directors room.

Spraying Urged to Control Alfalfa Weevil

ITHACA, N.Y.—The alfalfa weevil, discovered in New York in 1955, may cause serious damage to that state's agriculture in 1958, according to Dr. George G. Gyrisco, New York State College of Agriculture entomologist.

The weevil, first found in Utah in 1904, was discovered in Orange County, New York in 1955 and this year 12 counties in the state are infested.

Dr. Gyrisco says the weevil infestation spreads at the rate of 40 to 60 miles a year.

By systemically stripping leaves and tender shoots from alfalfa plants and leaving only bare stems, the adult weevil and its larvae totally destroy the first cutting of the alfalfa hay crop and seriously damage cuttings taken later in the season. As second choice, the weevils like other legumes, such as clovers, birdsfoot trefoil and beans.

Even with a relatively small infestation at present, Dr. Gyrisco predicts serious trouble in some areas by 1958 unless something is done to control the weevil. Weevil numbers build up fast since each female can lay as many as 1,500 eggs.

The entomologist recommends applying insecticides to infested alfalfa in either the fall after cows are through with aftermath grazing or in the early spring.

New York counties definitely infested with this pest are: Ulster, Greene, Columbia, Nassau, Suffolk, Westchester, Putnam, Sullivan, Dutchess, Delaware, Rockland, and Orange.

JOINS TEXAS STAFF

COLLEGE STATION, TEXAS — William F. Bennett recently joined the headquarters staff of the Texas A&M Agricultural Extension Service as agricultural chemist. He will supervise operation of the soils testing laboratory and will lend assistance to agricultural workers in Texas on soil fertility problems. Mr. Bennett will fill the position formerly held by M. K. Thornton.

New England News Notes

By GUY LIVINGSTON
Croplife Special Correspondent

The summer drouth has been severe and has cost millions in ruined and damaged crops. However, Louis A. Webster, Massachusetts state director of marketing, said that farmers with irrigation water, mulched gardens and land well loaded with organic materials, did not have as bad a time. There haven't been as many molds and mildews, root rots and various plant diseases as during a damp season, he pointed out. Some insects, he said, have even been locked up in their pupae because there hasn't been enough moisture to soften the shell.

Dutch Elm Disease

An outbreak of Dutch elm disease is causing alarm in New England. Latest spots hit by the disease were the elms on historic Boston Common and in the Public Garden, several of which had to be destroyed. Elm trees in Providence, R.I. were reported similarly affected. Both Providence and Boston park commissioners said they had hoped that the disease had been checked last year when a number of infected elms were felled. In Massachusetts, the Shade Tree Laboratories, University of Massachusetts, is testing specimens from trees suspected of Dutch elm disease.

Bright Farm Picture

Although the Yankee farmer has been hit by hurricanes, floods, tornadoes and now drouth, all in the last decade, the farm picture in Massachusetts is bright, according to Roy Hawes, outgoing state agriculture commissioner. Farm production in Massachusetts is running at a $2,000,000,000 a year rate.

In 1944, according to the federal farm census figures, the gross product of Massachusetts' farms was worth $114,838,916. By 1949, it had jumped to $135,349,945. Now, $2,000,000,000. Farm income growth in Massachusetts and New England, however, has been paralleled by a steady decline in the number of farms. In 1945, there were 37,007 farms in Massachusetts. By 1954, there were only 17,361.

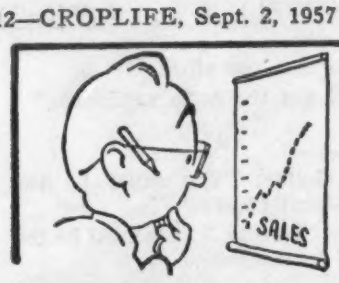
In Worcester County, the number of farms dropped from 6,505 to 3,267 in the same period. However, agriculture officials pointed out that many of the farms that went out of business were inefficient, located on marginal land and did not produce a proper livelihood for their operators. They stated that total farm picture is improved by the elimination of such farms.

Agronomist Retires

Ralph W. Donaldson, extension agronomist, University of Massachusetts, retired July 1 after 32 years of extensive work in agricultural education. Promotion of improved techniques in farming was always his main interest. In 1927, his "County Program of Soil Improvement" won recognition in a nationwide contest. He helped introduce the use of borax in Massachusetts 25 years ago as the remedy for boron deficiency existing in rutabagas, certain other vegetables and legume crops.

TOBACCO SEED LAW CHANGE

RALEIGH, N.C.—Several new sections have been added to the North Carolina general seed law "to prevent the mislabeling of tobacco seeds as to variety." One of the new sections, which was endorsed by the state board of agriculture, provides that any flue-cured variety offered for sale in the state must be recorded with the commissioner of agriculture before Nov. 1 of each year.



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"Ach, you are talking foolish like Pat," muttered her husband still at the window. "A honeymoon after 21 years? What good is that?"

"It means a lot to me," Minnie said slowly. "At the Ladies Aid sometimes, the women talk about their husbands and their honeymoons and where they spent them. I never tell them. How can I say I spent my honeymoon at home and working days at the hotel in the kitchen?"

"And lots of those ladies have husbands that are in debt," Oscar exclaimed. He came and stood at the end of the bed in the dark, the accordion now putting forth with a dreamy waltz. "I know. I am on the board of directors at the bank. They don't want me, but I am there. I look at the loan applications. I always say no. I know what people owe. And some are in the church, too."

"Couldn't we take a honeymoon, even if it's only down to the county seat, Oscar?" Minnie said desperately.

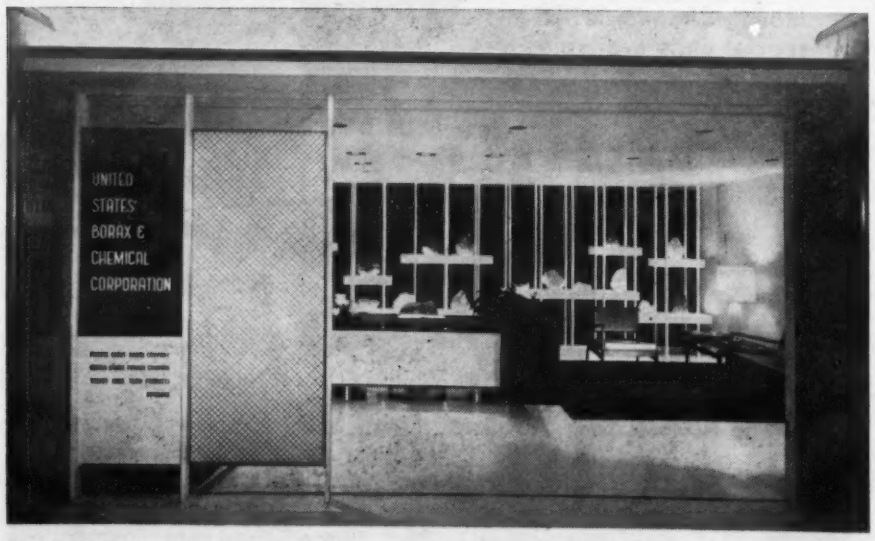
"Honeymoon," Oscar said peevishly. "Some people are on a honeymoon all their lives, and, ach, they are in trouble because of it. Some of these farmers spend and spend and then can't pay us for fertilizer. They think they are still on a honeymoon. One of these days I will sue some of them."

"It would only cost $30 maybe," Minnie persisted in a low voice. "I could use my raspberry money. We had a good crop and I picked lots of them and delivered them. Just one night in a nice hotel, and a dinner in a place with music, and then maybe a show after—and, and popcorn."

"Minnie!" Oscar reprimanded sharply. "Ach, do not think of spending your money so foolishly. Give the $30 to me. I can put it in the building and loan for you at 4%. You will make $1.20 a year. Yah, that is better."

The accordion music grew louder and the singing more boisterous. Oscar swore in German. "Ach, I will have to take the spare bedroom, Minnie. I can't stand it in here on Rudolph's house side. I'll put cotton in my ears, then maybe I won't hear that music. That Rudolph, I will tell him a piece of my mind when I see him. Good night, Minnie."

But Minnie did not hear him as he closed the door and proceeded down the hall to the spare bedroom. She was crying bitterly into her pillow, something she had been doing for many years.



NEW OFFICES—United States Borax & Chemical Corp. has announced that it has moved its combined offices to 50 Rockefeller Plaza in New York. The company will occupy all of the eighth floor and about one-half of the ninth floor. The space being used will be the headquarters of the two principal divisions of the corporation, Pacific Coast Borax Co. and United States Potash Co. divisions, and it will also serve as the eastern headquarters of the 20 Mule Team Products Division. The offices have been completely air-conditioned and redecorated by Maria Bergson Associates, New York City. Several of the permanent features of the new offices include an illuminated display of borate and potash ores in the main lobby and a large combined conference and board of directors room.

Spraying Urged to Control Alfalfa Weevil

ITHACA, N.Y.—The alfalfa weevil, discovered in New York in 1955, may cause serious damage to that state's agriculture in 1958, according to Dr. George G. Gyrisco, New York State College of Agriculture entomologist.

The weevil, first found in Utah in 1904, was discovered in Orange County, New York in 1955 and this year 12 counties in the state are infested.

Dr. Gyrisco says the weevil infestation spreads at the rate of 40 to 60 miles a year.

By systemically stripping leaves and tender shoots from alfalfa plants and leaving only bare stems, the adult weevil and its larvae totally destroy the first cutting of the alfalfa hay crop and seriously damage cuttings taken later in the season. As second choice, the weevils like other legumes, such as clovers, birdsfoot trefoil and beans.

Even with a relatively small infestation at present, Dr. Gyrisco predicts serious trouble in some areas by 1958 unless something is done to control the weevil. Weevil numbers build up fast since each female can lay as many as 1,500 eggs.

The entomologist recommends applying insecticides to infested alfalfa in either the fall after cows are through with aftermath grazing or in the early spring.

New York counties definitely infested with this pest are: Ulster, Greene, Columbia, Nassau, Suffolk, Westchester, Putnam, Sullivan, Dutchess, Delaware, Rockland, and Orange.

JOINS TEXAS STAFF

COLLEGE STATION, TEXAS — William F. Bennett recently joined the headquarters staff of the Texas A&M Agricultural Extension Service as agricultural chemist. He will supervise operation of the soils testing laboratory and will lend assistance to agricultural workers in Texas on soil fertility problems. Mr. Bennett will fill the position formerly held by M. K. Thornton.

New England News Notes

By GUY LIVINGSTON
Croplife Special Correspondent

The summer drouth has been severe and has cost millions in ruined and damaged crops. However, Louis A. Webster, Massachusetts state director of marketing, said that farmers with irrigation water, mulched gardens and land well loaded with organic materials, did not have as bad a time. There haven't been as many molds and mildews, root rots and various plant diseases as during a damp season, he pointed out. Some insects, he said, have even been locked up in their pupae because there hasn't been enough moisture to soften the shell.

Dutch Elm Disease

An outbreak of Dutch elm disease is causing alarm in New England. Latest spots hit by the disease were the elms on historic Boston Common and in the Public Garden, several of which had to be destroyed. Elm trees in Providence, R.I. were reported similarly affected. Both Providence and Boston park commissioners said they had hoped that the disease had been checked last year when a number of infected elms were felled. In Massachusetts, the Shade Tree Laboratories, University of Massachusetts, is testing specimens from trees suspected of Dutch elm disease.

Bright Farm Picture

Although the Yankee farmer has been hit by hurricanes, floods, tornadoes and now drouth, all in the last decade, the farm picture in Massachusetts is bright, according to Roy Hawes, outgoing state agriculture commissioner. Farm production in Massachusetts is running at a $2,000,000,000 a year rate.

In 1944, according to the federal farm census figures, the gross product of Massachusetts' farms was worth $114,838,916. By 1949, it had jumped to $135,349,945. Now, $2,000,000,000. Farm income growth in Massachusetts and New England, however, has been paralleled by a steady decline in the number of farms. In 1945, there were 37,007 farms in Massachusetts. By 1954, there were only 17,361.

In Worcester County, the number of farms dropped from 6,505 to 3,267 in the same period. However, agriculture officials pointed out that many of the farms that went out of business were inefficient, located on marginal land and did not produce a proper livelihood for their operators. They stated that total farm picture is improved by the elimination of such farms.

Agronomist Retires

Ralph W. Donaldson, extension agronomist, University of Massachusetts, retired July 1 after 32 years of extensive work in agricultural education. Promotion of improved techniques in farming was always his main interest. In 1927, his "County Program of Soil Improvement" won recognition in a nationwide contest. He helped introduce the use of borax in Massachusetts 25 years ago as the remedy for boron deficiency existing in rutabagas, certain other vegetables and legume crops.

TOBACCO SEED LAW CHANGE

RALEIGH, N.C.—Several new sections have been added to the North Carolina general seed law "to prevent the mislabeling of tobacco seeds as to variety." One of the new sections, which was endorsed by the state board of agriculture, provides that any flue-cured variety offered for sale in the state must be recorded with the commissioner of agriculture before Nov. 1 of each year.

FARM SERVICE DATA

Extension Station Reports

Development of more potent pesticides and more efficient methods of applying them have led to general acceptance of grape insect pest control programs on a commercial scale, according to Dr. E. F. Taschenberg, Cornell and New York State University entomologist at the experiment station at Geneva.

"In 1940 only about 5% of the grape acreage of the state was sprayed for insect control, while now about 90% is treated annually," he states.

The chief pests of grapes in New York State are the grape berry moth, leafhoppers, rootworm, steely beetle and the rose chafer, Dr. Taschenberg said. The feeding of these pests may result in lower yield and fruit quality.

Prior to 1900 control of grape pests was largely by mechanical means, relates the Station scientist. Hand picking and destruction of the insects, the use of sticky shields to trap the pests and bagging grape clusters were employed.

"By the turn of the century spraying with chemicals began to receive attention," Dr. Taschenberg said. "But limitations of the insecticides available at the time made it necessary to develop a spray program for each pest. With the development of such effective materials as DDT, parathion and EPN control of the major grape pests has been greatly improved."

Introduction by the Experiment Station of the hooded spray boom which makes possible a one-man operation is also credited with increasing the effectiveness of vineyard spraying. The hooded boom partially envelopes the vine, giving excellent coverage of both fruit and foliage and reducing interference of the wind in the spraying operation.

★

Chloro IPC has been found to be valuable as an aid in weeding onions in many vegetable growing areas, William H. Lachman, research professor, University of Massachusetts, Amherst, has reported.

"If its use is contemplated a sprayer is necessary," he pointed out, "and the rig should be calibrated very accurately before applying any of the chemical on the crops.

"At the outset it should be realized that not all weeds will succumb to Chloro IPC at the concentrations suggested as being safe for onions. Ordinarily, Chloro IPC in pre-emergence applications will control the following weeds very satisfactorily: chickweed, purslane, smartweed, most grasses (but not barnyard grass); knotweed and narrow leafed plantain. Weeds not ordinarily controlled effectively with Chloro IPC include lamb's quarters, rough pigweed, henbit, yellow rocket, groundsel and galinsoga.

"This chemical should be applied within a day or two of planting the sets. It should not be expected that Chloro IPC will kill large weeds when sprayed upon them. The chemical, therefore, must be used and sprayed on the land before the weeds start to grow. The suggested rates to use are 4 to 6 quarts per acre in pre-emergence applications."

★

Plant science research at the Connecticut Agricultural Experiment Station has shown that diseased geranium plants can be cured and restored to normal condition by treatment with chemical compounds. E. M. Stoddard, a plant pathologist and botanist on the station staff, has found that small amounts of readily available compounds cured geraniums infected with black leg, the name growers use to identify a Fusarium rot and a bacterial rot, or both.

The combination Mr. Stoddard used to control the diseases and cure the plants is oxyquinoline sulfate at the rate of about one-third of an ounce and streptomycin sulfate at the rate of about one-quarter of an ounce, in 10 gallons of water. The mixture was applied as a soil drench.

Following five applications of these compounds at weekly intervals, about 80% of the diseased plants recovered and regained normal condition. Only about 10% of the untreated diseased plants survived. Cuttings made from the treated plants show no evidence of stem or root rot.

Before Mr. Stoddard's research on this problem was completed, a Connecticut grower called on him for help when black leg threatened 2,000 geraniums being grown for Memorial Day trade. Results of this first commercial test of the new chemotherapeutic treatment confirmed the effectiveness of Mr. Stoddard's experimental control.

★

Use of fertilizer is an important way to maintain production of farms in West Virginia, according to Kenneth P. Brundage, extension farm management specialist at West Virginia University. Fertility of the land must be replaced as crops and animals are raised on the land or gradual strip mining of farms results, Mr. Brundage said.

"Continued production of West Virginia farms will require adequate replacement of plant food to the land," Mr. Brundage commented. "Fertilizer and lime are needed on farms that will be prosperous in the years ahead."

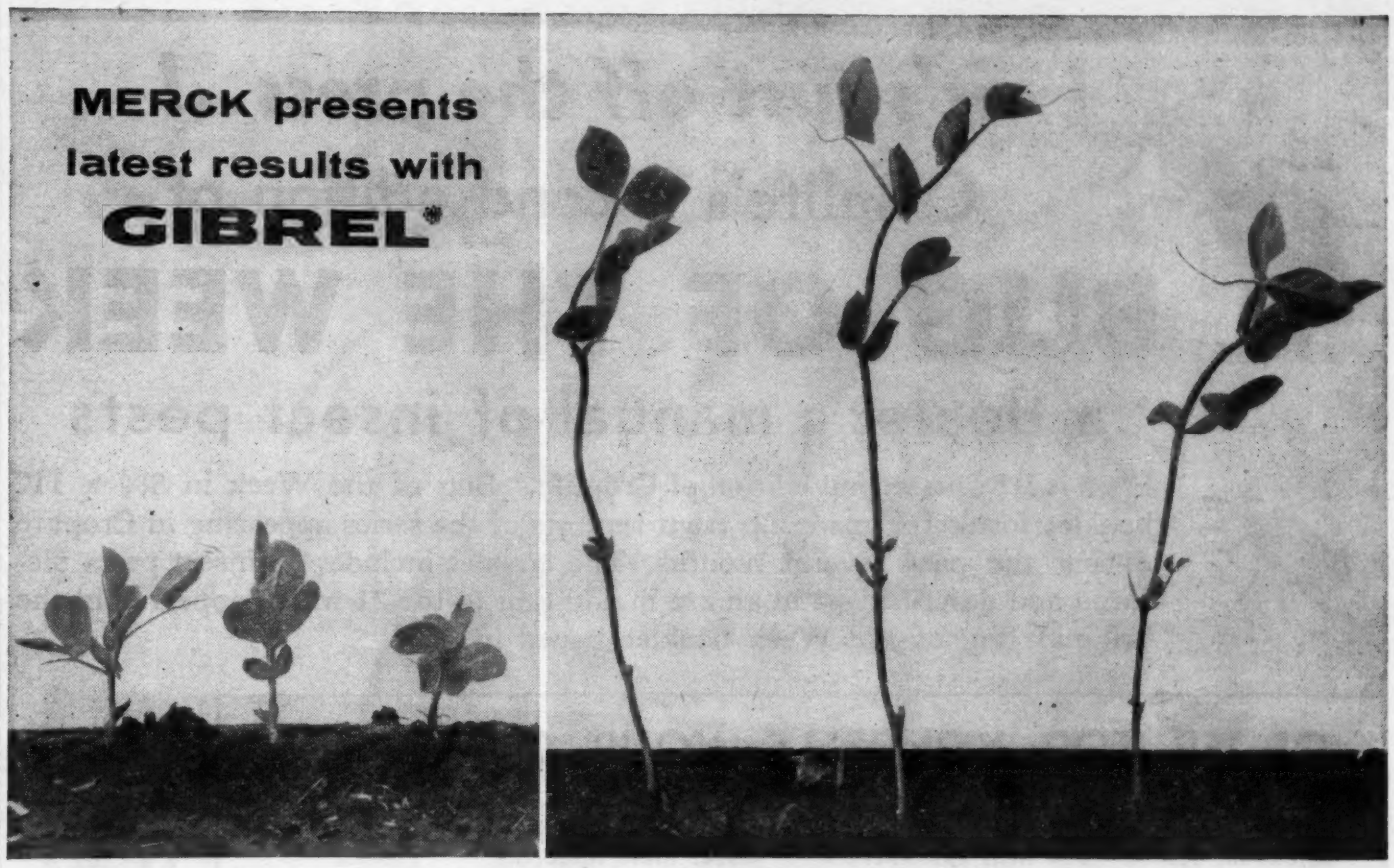
SCS APPOINTMENTS

AMHERST, MASS.—Dr. Benjamin Isgur, Massachusetts state conservationist, Soil Conservation Service, Amherst, has announced the appointment of two new staff members. They are Stephen J. Zayach, as state soil scientist, and Wilson O. Hill, as plant materials technician for the New England states.

COUNTY AGENTS TO MEET

BOSTON—The 1957 convention of the National Association of County Agricultural Agents will be held at the Sheraton Plaza Hotel here Oct. 13-17.

MERCK presents latest results with GIBREL®



Alaska pea seedlings from untreated seeds are too small to cultivate, too short to shade weeds.

Seed treatment with GIBREL brought seedlings up three days earlier, made them grow tall above weeds.

New GIBREL Seed Treatment Accelerates Early Growth

The Merck experimental program for GIBREL is now in full swing, building a solid foundation for the future possible uses of this new plant growth stimulant. Carefully controlled Merck-sponsored studies in important crop-growing areas across the country indicate promising results from seed treatment with GIBREL. Peas, beans, soybeans, cotton and sugar beets all show good response when seeds are treated with a slurry of GIBREL.

According to all reports, seed treatment with GIBREL causes a prompt and uniform emergence, excellent stand and increased growth of seedlings. Practical benefits include faster emergence, making plants come up before weeds. In many cases treated seeds may be planted earlier and crops marketed sooner since plants respond to GIBREL even in cold, wet soils and with low temperatures.

Although these uses look promising, specific recommendations for use of GIBREL in food and feed crops will be published when complete experimental data are available.

Keep up to date with news about GIBREL *by looking first to* MERCK, *pioneers in gibberellin research and production.*

Comparison of Alaska pea growth three weeks after a cold, wet spring planting. Treatment with GIBREL (½ pt. medium strength slurry per 100 lbs. seeds) caused seedlings at right to emerge faster, have better stand than control seedlings at left. Photo taken at DeForest, Wis. trial fields of the Oconomowoc Canning Company.

*GIBREL is the Merck trademark for gibberellin plant growth substance.

GIBREL—a product of MERCK

© Merck & Co., Inc.

MERCK & CO., INC. Rahway, New Jersey

RETAIL ADVERTISING

(Continued from page 9)

sports appropriate to the particular season, and placement of advertisements on a newspaper's sports pages.

The objective is to make the message appeal distinctly to the audience to be reached.

Keep the Approach Realistic: No single approach can be used all the time. Sometimes prestige should be emphasized. Other times price will be the key point. At still other times it is good to highlight the benefits of the product to a buyer. Suppose, for example, that a man suffers from hay fever. Which does he want more: an air-conditioning unit as a machine, or pollen-free air for a good night's sleep? He wants the latter. Hence, good advertising will stress the good night's sleep. It will show in an original way how the air conditioner can deliver that benefit.

However, in the case of well-established products that are in wide demand, a retailer often would look foolish if he placed more emphasis on benefits than what is implied in good descriptions of merchandise being offered at a competitive price.

Sell Your Own Store: Dealers should try to make sure their advertising sells just for them. Not long ago a man saw a gas incinerator advertised on television by a retail store. He was so impressed he went to a store for a demonstration and finally purchased the appliance. But he didn't visit or buy from the store which advertised. This same thing can happen in other types of advertising, too, if the advertising lacks individuality.

Therefore, in advertising it is wise to concentrate on the service, price, location, or wide assortment which is different from the competitors. Advertise distinctive features in a unique way, so that the customers will come just to your store to buy. And keep your efforts in good taste.

INDIVIDUALIZE THE APPEARANCE: The appearance—or the sound—of an advertisement contributes perhaps the most toward distinctiveness. The impression advertising makes is the product of many things: Color, illustrations, type face, proportion, over-all design, sounds, and so on. By selecting carefully all elements of the advertisement and combining them skillfully, a dealer can make each advertisement take on the personality he wishes. Large black type, for example, tends to shout from a page. If a store is a shouting promotion operation, perhaps the owner will want to tend toward a selection of heavy type faces for headlines, prices, and display lines.

Lighter face types, on the other hand, speak more softly. To develop an idea of high-quality or low-pressure salesmanship, consider using smaller type faces for headlines and generous open space in the layout.

Likewise, the balance of the advertisement—the way the art and copy are arranged within the space—tells the reader a great deal about the personality of the store. A formal balance, with every line of type and every illustration centered, often reflects a stability. A cluttered haphazard arrangement within an "ad" often tends to suggest a cluttered operation, so beware of that pitfall.

Try to allow time for designing an advertising layout which is systematic, easy to read, attractive to the eye, and consistent with the personality of the store. Then, when satisfied with the layout, try to stick to essentially the same arrangement for each of the advertisements. In time readers will associate the layout with that certain store.

Pick Out a Symbol: An inexpensive way to begin building individuality in appearance is to purchase a symbol cut to appear in every "ad" run. Decide on an attractive, basic design, and arrange to have a printing cut made of that design. The name should be easy to read and the design should be distinctive enough to stand out on the page. Include the address too. Many readers, no matter how long you've been in business, appreciate knowing how to find your store easily.

The resulting effect will begin to lend an individuality to the advertising. In addition, during a special promotion, the owner may want to consider using six or eight small advertisements rather than taking the same amount of space in one large advertisement. Or he may decide to schedule his advertisements at a time different from most of his competitors to avoid having a small advertisement "swallowed" among a number of larger competing presentations.

The owner may want to look into the possibility of using a reverse plate in small space advertisements. With a reverse plate, the printing reproduces white on a black or colored background, and the advertisement may achieve an attractive appearance with high attention value at relatively low cost. Sometimes advertisements which are wider than they are deep can be quite appropriate and distinctive in appearance. This is particularly true if the same technique is not frequently used by others in the same publication.

Television provides excellent opportunities for combining distinctive seen-and-heard impressions. The fact that movement is possible is important. For example, one television commercial always begins with a brief sequence in which a man produces a camera, aims it directly at the audience, and snaps a candid picture. The remainder of the commercial is altered to provide an individualized "signature."

INDIVIDUALIZE THE COPY: Not all advertising individuality comes from appearance. Individuality can be reflected—sometimes best reflected—in the actual words of an advertisement. Most people in a town are interested in new developments on the local scene. Therefore, cash in on this readymade interest by bringing national advertising appeals down to the local level. Instead of trying to copy the clever appeals and professional techniques used in national advertising, present the store in a natural, localized manner. Capitalize on the customers' tastes and personality.

A high-quality retailer in Indiana, for example, ran an advertisement with the headline: "Good Names Go Hand-in-Hand." In the copy he tied together the personality of his store, the high quality of the branded goods offered for sale, and the tastes of his customers. His advertising was localized, and the copy reflected the merchandising objectives of his store.

Words Do the Talking: Even with the best of illustrations, most "ads" require at least some words to complete the message. These words, or copy, can often "talk" with the customers almost as if the salesman were with them face to face. A men's clothing store in the midwest specializes in informal, chatty copy for telling its story. By some standards the

it's just off the press..!

Croplife's second edition of

BUG OF THE WEEK

a dealer's manual of insect pests

Here it is! The second edition of Croplife's Bug of the Week in 8½ x 11" booklet form. It's made up from reprints of the series appearing in Croplife during the past several months. The booklet includes 32 insect pests pictured and described—and all are in addition to the 21 which appeared in the original Bug of the Week booklet issued in 1954.

ORDER FOR YOURSELF, YOUR CUSTOMERS

You'll find many uses for this interesting, factual booklet. It's ideal for use by salesmen, dealers—and their customers.

Clad in an attractive cover, the booklet is packed with accurate information about these insects:

- European Corn Borer
- Khapra Beetle
- Red Flour Beetle
- Onion Thrips
- Pepper Weevil
- Rapid Plant Bug
- Rose Chafer
- Two-Spotted Mite
- Cabbage Aphid
- Rose Leaf Beetle
- Potato Leafhopper
- Cotton Fleahopper
- Alfalfa Caterpillar
- Cowpea Curculio
- Corn Rootworm
- House Fly
- Spotted Cucumber Beetle
- Stink Bug
- Yellow-Striped Armyworm
- Blow-Fly
- White-Fringed Beetle
- Confused Flour Beetle
- Corn Earworm
- Leafhopper
- Gypsy Moth
- Mexican Bean Beetle
- Strawberry Weevil
- Harlequin Bug
- Spotted Alfalfa Aphid
- Spider Mite
- Cadelle Beetle
- Sweet Potato Weevil

SINGLE COPY PRICE: 50 CENTS

Reduced rates quoted on quantity orders.

IMPRINT YOUR FIRM NAME

The back cover has been left blank so it can be utilized by dealers and others for promotional purposes. Company name or your advertising message can be imprinted, making the booklet a valuable sales piece. Rates for imprinting on request. Give full details.

FIRST EDITION AVAILABLE

A limited quantity of the First Edition is still available at 25c a copy. It features 21 insect pests.

clip coupon below

Fill in coupon below and mail with remittance to: Reprint Department, Croplife, Box 67, Minneapolis 1, Minn.

Name .....

Address .....

City ..... Zone ..... State .....

Check Type of Business

- ☐ Pesticide Formulator
- ☐ Fertilizer Mixer
- ☐ Dealer

If interested in purchasing supply with your imprint, please write copy for back page, and indicate number you would want. Price will be submitted by return mail. Copy for imprint (use separate sheet if necessary): .....

.....

Quantity desired: .....

py is long, sometimes three to six ragraphs about a single item. But any prospective customers read the py, like it, and come to the store buy.

A shirtmaker in Honolulu uses dgin English in his advertisements provide originality in his copy and tie together his product and the awaiian atmosphere. A men's wear ore in the East, with a different ob- ctive, specializes in British imports d hence emphasizes British termi- ology in its copy.

Nor is individuality in copy re- ricted to printed words. A spoken essage on the radio may also be iven distinctiveness. For instance, ne automobile agency featured a ersonal message, delivered in the un- sual voice of the owner-manager, in- iting listeners to come in and meet im personally. Along similar lines, nother businessman had each radio ommercial start and end with a hispered slogan.

Several small-space advertisers ave developed ingenious individuality n their advertising by presenting a egular column in which they may escribe in conversational language uch things as special items in stock, nteresting sidelights about their tore, unusual customers, hints on ashions, best food buys, recipes, and he like. An independent grocer in Il- inois, for example, regularly runs ust such an advertisement—one col- mn, 4 in. long with his own written ignature at the bottom of each col- mn. As a result, he has been able to stablish a "personal" relationship with many of his readers.

INDIVIDUALITY PAYS: Although he advertising budget may be small, hances are that a merchant can nake his promotions more effective y developing greater distinctiveness. This individuality can make a small pace more attractive and increase its ttention value on crowded pages. Some small retailers have discovered uch individualized advertisements an create unusually strong reader nterest. In fact, customers may ac- ually look for the "ads." Individual- ty in advertising can help to build n effective personality for the store, contributing to new sales and greater customer loyalty. Also it will help tie together those promotions appearing on different days or in different media. As a result of this continuity, customers will often remember a store better because each advertise- ment run contributes to the next.

FOR FURTHER INFORMATION: There are several national organiza- tions which are concerned with the development of retail advertising. Among them are the Bureau of Ad- vertising of the American Newspaper Publishers Association, 570 Lexington Avenue, New York 17, N.Y.; the Na- tional Association of Radio and Tele- vision Broadcasters, 1771 N Street, N.W., Washington 6, D.C.; the Amer- ican Association of Advertising Agen- cies, 420 Lexington Avenue, New York 17, N.Y.; the Advertising Fed- eration of America, 250 West 57th Street, New York 19, N.Y.; the Point- of-Purchase Advertising Institute, 11 West 42nd Street, New York 36, N.Y.; the Direct Mail Advertising Associa- tion, 3 East 57th Street, New York 22, N.Y.; and the Mail Advertising Service Association International, 18120 James Couzens Highway, De- troit 35, Mich.

An advertising agency may be con- sulted for consultation. Usually for a set fee an agency can help analyze potential customers, recommend the most profitable type of media, and suggest the sort of "personality" a store should try to stress. Local ad- vertising agencies can render an im- portant service in this way, even though they do not prepare the store's day-to-day retail advertising.

Businessmen who want to read fur- ther on this subject are offered the following selected references as start- ing points:

Advertising in Modern Retailing, by C. M. Rowland. Harper and Brothers, 49 E. 53rd Street, New York 16, N.Y. 1955. $4.50.

Advertising Handbook, by Roger Barton. Prentice-Hall, Inc., Engle- wood Cliffs, N.J. 1954. $8.

Advertising: Theory and Practice, by C. H. Sandage. Richard D. Irwin, Inc., Homewood, Ill. 1953. $7.20.

How to Write Advertising That Sells, by Clyde Bedell. McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York 36, N.Y. 1952. $6.

Advertising: Text and Cases, by Neil H. Borden. Richard D. Irwin, Inc., Homewood, Ill. 1949. $7.80.

Printing and Promotional Hand- book, by Daniel Melcher and Nancy Larrick. McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York 36, N.Y. 1949. $6.

NEW LEAFLET

AMHERST, MASS.—A new leaflet, "How to Fertilizer Trees and Shrubs," has been released by the University of Massachusetts.

OVER THE COUNTER

(Continued from page 9)

to be informed, courteous, polite, service-minded and aware of the nature and purpose of their jobs. They need to know the value of many little things which attract people and bring them back so you can build them into steady depend- able patrons."

The employee is usually not a self-starter. He will not start something new for many reasons. First, he waits for the supervisor to direct him. Sec- ondly, he may be afraid that initia- tive on his part may lead him into channels not approved by his su- perior. Third, he may not have the monetary incentive to do more than he is told to do.

Sales training of the right type, however, will help him exercise his initiative in directions which the deal- er approves. He will often respond and surprise himself and the dealer. To a large extent the employee is what the dealer makes him.

Too many dealers think of em- ployee sales training as a scholar- ly, highly specialized process. It is not. The alert dealer can start his sales training program over coffee in the store, as several dealers have done. He can do it by calling his employees into his office one at a time and talking things over with them, detailing the jobs of each and asking for their opinions.

Or, he can call in supply salesmen and have them talk to all employees at a night meeting on how to service and sell the products the salesman sells. The dealer, too, can have a monthly night meeting himself, de- tailing his store policies and how to win and hold customers.

There are many ways to start and carry on a program of sales train- ing, large or small. But it should not be shelved. Better trained, better selling employees will be the reward.

control... your emulsifiable pesticide concentrates

FOR INSECTICIDE FORMULATIONS
new emulsifier "team" of
EMCOLS H-300X / H-500X

This emulsifier "team" provides many advantages in combination with most of the commonly used insecticides such as . . . Aldrin, BHC, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Lindane, Toxaphene and others.

FOR sludge-free HERBICIDE FORMULATIONS
new emulsifier "team" of
EMCOLS H-700 / H-800

The same advantages for herbicides, too, when this new "team" is used for Hi and Lo-Volatile Esters of 2, 4-D and 2,4,5-T . . . Esters of MCP.

Advantage #1 . . . greatest flexibility in performance with optimum ageability.

Advantage #2 . . . controlled emulsion re- quirements . . . Emcol emulsifiers can be blended to tailor make emulsifiable concen- trates for variations in formulation components, water conditions, field dilution and emulsifi- ability requisites.

Advantage #3 . . . greater versatility for use with all types of water.

Advantage #4 . . . low emulsifier cost per gallon of concentrate.

Advantage #5 . . . simplified handling of emulsifier inventory.

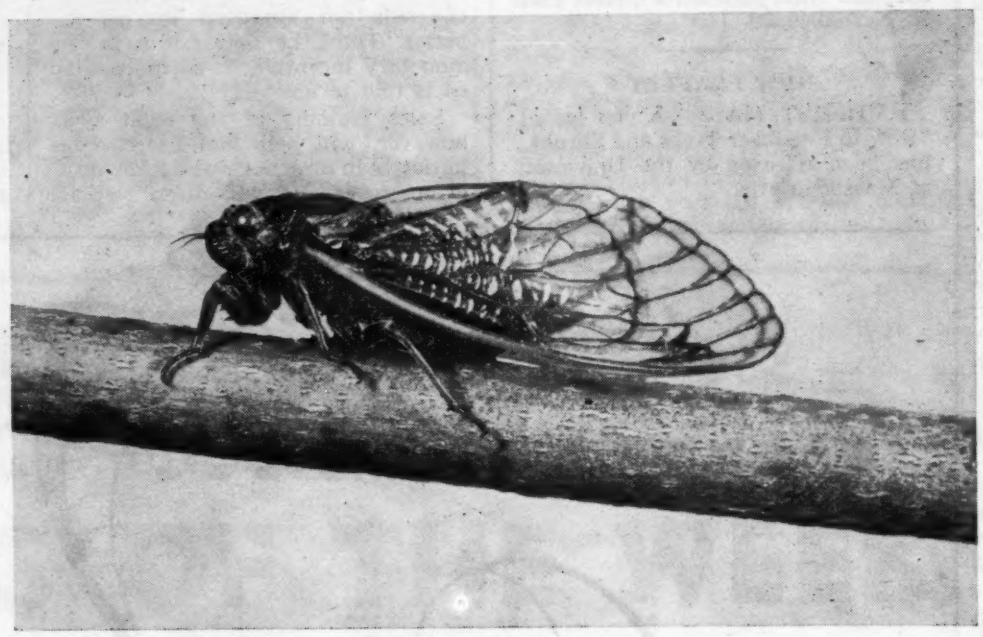
We will be happy to recommend the proper emulsifier blends for your specific pesticide, solvent and formula needs. Contact your lo- cal Emulsol representative, or us directly for prompt technical ser- vice. Technical Bulletin on request.

Emulsol

EMULSOL CHEMICAL CORPORATION
division of Witco Chemical Company
Dept. CR-9 • 75 East Wacker Drive, Chicago 1, Ill.

BUG OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board



Periodical Cicada

How to Identify

These insects, often called the "17-year locust", are about 1⅝ in. long in the adult stage (shown above). Most of its body is black, the legs are reddish, some of the veins in the nearly transparent wings are orange, and its eyes red. Periodical cicadas, closely related to common cicadas, have become the subject of odd superstitions and stories regarding their appearance. Actually, they are not "locusts" at all.

Habits of Cicadas

Mystery surrounds the instinct which urges nymphs to emerge from the ground after spending 13 years (in the south) or 17 years (in the north) in the soil at depths from 18 to 24 inches. Female cicada punctures the bark of a twig and makes a pocket in the wood, where she lays some two dozen eggs in a couple of rows. From five to twenty such pockets are made in a twig, and the total number of eggs a single female can lay number from 400 to 600. These eggs hatch in about 7 weeks and the hatched-out nymphs fall to the ground into which they burrow until they find roots from which they might suck juice. The nymphs remain alive in the ground for 13 or 17 years, at the end of which time they burrow upward to within about an inch of the surface. Here they halt and wait for whatever signal or urge which compels them to emerge in vast numbers and head for trees, bushes, poles, or other upright objects. Here the insect sheds its nymphal skin and becomes an adult. They mate within a week after becoming adults, and in a few days, the females lay eggs. The adults live only five or six weeks, but their "song", an incessant whirring, droning monotone keeps going during each day of that time.

Damage Done by Cicadas

The egg-laying habits of the female can cause severe damage or even destruction to young, transplanted trees in nurseries and orchards, and some damage to older trees. The punctures in twigs and branches also offer shelter and feeding locations for scale insects, woolly aphids, and other pests. Some fruit is also lost from bearing trees that have been severely injured.

Control of Cicadas

This insect seems to prefer oak, apple, hickory, peach, and pear trees for egg-laying, so in the case of fruit-bearing trees care must be taken in the application of insecticides for control. Spraying should begin just as the cicadas begin to lay eggs, and repeated applications are usually needed to keep an infestation in check. Early morning sprayings are most effective.

Illustration of Periodical Cicada courtesy of U.S. Department of Agriculture.

IMC POTASH MINE

(Continued from page 1)

small, experienced staff of techni-
ns and experts from the company's
rlsbad, N.M. operation will train
al workers at the outset, with local
rkmen taking over as their train-
is completed, Mr. Ware said.
Mr. Ware said that competitive
nditions in the potash industry call
for the highest degree of mining
iciency, including maximum auto-
tion, to make the product competi-
e. He pointed out "definite ele-
nts of risk" which had to be con-
ered in a venture like the Ester-
zy operation, but said his company
d been attracted to the possibilities
Canadian potash because of its re-
rted richness and because of favor-
le freight rates into heavy-use sec-
ns of the U.S.
"All of the technical work done by
r company in estimating the quan-
y and grade of the ore and the
st of production was appraised and
nfirmed by independent consultants
pert in that field," said Mr. Ware.
He was optimistic about future de-
and for potash, despite its present
od world supply.

"There has been a steady growth n the consumption of potash in re- ent years, not only in the U.S., but lsewhere in the world," he said, and this leads us to believe that here will be an era of increasing nd lasting demand.

"As farm lands become depleted of eir plant nutrients, more potash ill be needed to restore them. We e not unmindful, though, that even arkets promising rapid growth can over-supplied. We are endeavoring meet this possibility with careful, orough, and imaginative world mar- eting methods."
The Utah Construction Co., San rancisco, is constructing the mine haft and several surface structures Esterhazy. The development area ncludes 450,000 acres which IMC ontrols under permits.

Unbalanced Soil Possible Cause Of Light Wheat

EAST LANSING — A Michigan tate University soil scientist, J. F. avis, may have part of the answer r the shrunken kernel and light- eight wheat crop this year.
Mr. Davis said the heavy use of ni- rogen on wheat land in recent years ay have led to an unbalanced fer- lity condition in the soil. Mr. Davis aid he found proof of the danger of nbalanced fertility in MSU wheat lots this year.
Mr. Davis reported that in the un- alanced plots yields were lower, even hough in some cases more fertilizer as applied. Much of the grain was hrunken and the wheat lodged badly.
The unbalance is preventing farm- rs from getting the same crop re- ponse from anhydrous ammonia that ey got when they first used the itrogen material, Mr. Davis said.
Crop yields may be high temporar- y because of reserve fertility that as been building up over the years, ut unless extra phosphorus and po- assium are used with the additional itrogen, response to anhydrous am- onia or any nitrogen fertilizer may ot be as great as it was at first, Mr. avis explained.

DISTRIBUTOR NAMED

DETROIT, MICH.—Ferry-Morse eed Co. has appointed Pacific Agro o., Seattle, as its exclusive North- est distributor for the 1958 garden- ng season. Products to be handled nclude packet assortments of seeds, awn grass, and the firm's "Bulk ack" vegetable seeds. Washington, regon, Northern Idaho, and Alaska ill be served by Pacific Agro. Lee yer, seed division head, will handle ealer relations.

Series of Weed Control Meetings Planned in California

SAN FRANCISCO—A series of symposium panel discussions on weed control, a costly problem in California agriculture, industry and to landscapers, will be held in September under the sponsorship of the California State Chamber of Commerce.

The first of the discussions is scheduled for Sept. 4, at the St. Claire hotel in San Jose, starting at 10 a.m.

Walter Ball, chief of the Division of Weeds and Rodents, California State Department of Agriculture, will act as panel moderator for most of the discussions.

The panels will consist of weed specialists representing the agricultural chemical industry in the state, the state and federal departments of agriculture, local nurserymen, county supervisors, agricultural commissioners, industrialists and the local fire departments.

Succeeding panels will be held Sept. 5 at the Hotel Fresno, Fresno; Sept. 6 at the Bakersfield Inn, Bakersfield; Sept. 12 at the Hotel Senator, Sacramento, and the Mendocino County fairgrounds, Ukiah, Sept. 27. All meetings are scheduled to start at 10 a.m.

Panel members at the Sept. 4 meeting will include: Maurice S. Beckley, Santa Clara County farm advisor, San Jose; H. N. Bosworth, associate landscape architect, State Division of Highways, Sacramento; Paul Dresher, past president, California Weed Conference, San Jose; Robert T. Durbrow, executive secretary, Irrigation Districts Assn., San Francisco; S. V. Christienson, president, Major Distributing Co., Salinas; Ray V. Hopper, senior engineer, outside plant practices department, Pacific Telephone & Telegraph Co., San Francisco; Dr. Oliver A. Leonard, assistant botanist, department of botany, University of California, Davis; Glen Knepper, president, Santa Clara County Cattlemen's Assn., Gilroy; Lloyd Plesse, deputy agricultural commissioner, Santa Clara County, San Jose, and Bruce Wiggins, fire marshall, Santa Clara County, Los Altos.

Purpose of the discussion is to determine major local weed control problems, and to arrive at methods for achieving local cooperation and coordination for regional and statewide control programs.

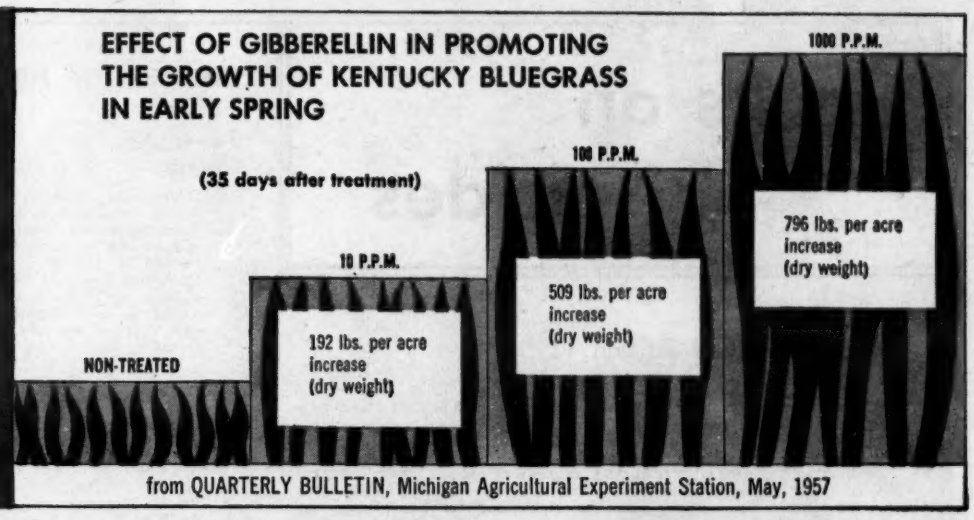
Following the morning session, William A. Harvey, weed specialist, University of California Agricultural Extension Service, will be the luncheon speaker.

FIRE ANT PUBLICATION

BATON ROUGE — The Louisiana State University Agricultural Extension Service has issued a new publication entitled "Get Rid of the Imported Fire Ant."

VELSICOL GIBBERELLINS

mean growth here


EFFECT OF GIBBERELLIN IN PROMOTING THE GROWTH OF KENTUCKY BLUEGRASS IN EARLY SPRING
(35 days after treatment)
NON-TREATED
10 P.P.M.
192 lbs. per acre increase (dry weight)
100 P.P.M.
509 lbs. per acre increase (dry weight)
1000 P.P.M.
796 lbs. per acre increase (dry weight)

from QUARTERLY BULLETIN, Michigan Agricultural Experiment Station, May, 1957

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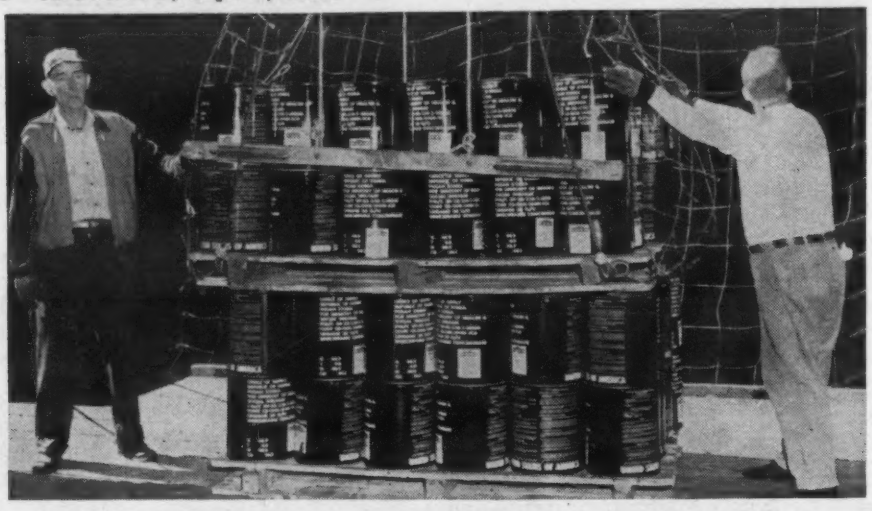

CHEM-LIN SHIPMENT—New York longshoremen are shown above loading ten truckloads of Chem-Lin 20 (Emulsifiable) aboard the SS Pioneer Mist, for shipment to Korea. It has been ordered by the Korean Ministry of Health. Chem-Lin, a product of the Chemical Insecticide Corp. of Metuchen, N.J., will be used in Korea in a nationwide campaign against agricultural pests, disease-bearing rodents, mosquitoes, gnats, roaches, silverfish, spiders, clothes moths, bedbugs and flies. Observers will be watching the effect of Chem-Lin upon the influenza outbreak in the Orient.

Calspray Appointment

SAN FRANCISCO — California Spray-Chemical Corp. announces the appointment of Ted Huggins as public relations consultant. Mr. Huggins served for many years as a staff member of Standard Oil Co. of California's Public Relations Department. He will maintain an office in San Francisco's World Trade Center and will work under L. F. Czufin, Calspray's advertising and public relations manager.

James S. Tolon Joins Zonolite Co.

CHICAGO—The appointment of James S. Tolon, 28, as sales representative for Zonolite Co. has been announced by the firm's Terra-Lite Division. Mr. Tolon will cover Ohio, Western Pennsylvania, and West Virginia, serving golf courses, fertilizer companies and garden supply dealers.

The firm mines and processes vermiculite, a mineral soil conditioner and agricultural chemical ingredient. Mr. Tolon, married and father of two, was previously with the Norwich Pharmacal Co. He lives at 14 Chalfonte Ave., Pittsburgh.

New York Weed Loss Set at $10 an Acre

ITHACA, N.Y.—Weeds caused losses of $10 an acre in plantings of corn, small grains and hay and in pastures in New York last year, according to S. N. Fertig, New York State College of Agriculture agronomist.

Much of the weed problem originated on highway right-of-ways, he said. Of more than 100,000 miles of roads in the state, only 10,000 miles were sprayed for weed control, Mr. Fertig said.

Books on Pesticides

WEEDS—Second Edition (1955)
W. C. Muenscher

Entire book has been revised and reset, with descriptions of seventy weeds added to the original list of five hundred, plus twelve new full-page plates depicting nineteen kinds. Keys and full descriptions provided for identification with detailed illustrations of 331. Types and sources of weeds, their means of reproduction and dissemination, and the amount of damage they inflict on crops. Specific directions for control, with reference to chemical methods of recent discovery $10.00

CHEMICAL BUSINESS HANDBOOK
Dr. John H. Perry

1,300 double column pages, the equivalent of several average books; 700 illustrations, by 124 contributors. Market research data section is 280 pages, business mathematics 200 pages, financial and accounting 142 pages, research and development 150 pages, sales and advertising 92 pages, twenty sections in all. The book deals with chemical management problems and is useful to technical men, engineers and executives, in the chemical and allied fields. Dr. Perry is editor of the Chemical Engineers Handbook, a companion publication $17.00

INSECT PESTS OF FARM, GARDEN and ORCHARD Fifth Edition (1956)
Leonard M. Peairs and Ralph H. Davidson

A standard text for 44 years. Includes insects affecting grasses, grains, cotton, legumes, vegetables, flowers, fruits, stored products, household goods and domestic animals. Contains a new chapter on insecticide formulations, spray mixtures, application equipment, etc. Material on forty new pest species added, including drastic changes in the illustration. 661 pages $8.50

DDT and NEWER PERSISTENT INSECTICIDES
T. F. West and G. A. Campbell

The first and major part of book is devoted to the physical and chemical properties, manufacture, formulation and applications of DDT. The second part deals with other chlorinated hydrocarbons whose insecticidal properties have been discovered recently and compares these new insecticides with DDT. The preparation of aqueous suspensions, solutions, emulsions, and dusts containing DDT, the compatability of DDT with other insecticides, fungicides and additions are covered in detail. Contains dozens of tables on the solubility of DDT in various solvents, the catalytic activity of accessory substances in the presence of DDT, analogues of DDT, the comparative toxicity, hydrolysis and solubility of DDT analogues, the toxicity of DDT for almost all important insects, etc. Many illustrations $8.50

APPLIED ENTOMOLOGY—Fifth Edition
H. T. Fernald and Harold H. Shepard

This text since 1921 has had an outstanding record of usefulness. The Fifth Edition preserves the general organization and coverage, with changes to improve the presentation and to incorporate new knowledge. Contains chapters on anatomy, physiology and development. The economic importance and control of insects are discussed in a general way with much attention to insecticides. The classification of insects is emphasized, with examples drawn from species conspicuous for being very harmful or decidedly beneficial. Specific control measure included for injurious forms. Last chapter considers other pest animals closely related to insects. 385 pages $7.00

DISEASES OF FIELD CROPS—Second Edition (1956)
James G. Dickson, Professor Plant Pathology, University of Wisconsin

Covers the diseases of cereals, grasses, legumes and fiber plants, which are the major food, feed and fiber sources throughout the world. More than 60 diseases incited by viruses, 40 by bacteria and 300 by fungi are listed and discussed in relation to field crop plants. Identification and information basic to its control, with emphasis on the problems of crop rotation, adaptation and the use of disease resistant varieties. This revised edition includes several new diseases, new illustrations and much recent research in the field $8.50

THE GARDENER'S BUG BOOK (1956)
Dr. Cynthia Westcott

The Complete Handbook of Garden Pests and their control. Information, scientifically accurate but easy to read on 1,100 insects, mites and other animal pests that attack trees, shrubs, vines, lawns, flowers, fruits and vegetables in home gardens. Illustrations in full color. Control measures combine the latest in chemical developments with time-honored cultural measures. Helpful to all who serve the general public and to truck farmers and fruit gardeners. 579 pages, cloth bound $7.50

THE CHEMISTRY AND ACTION OF INSECTICIDES
Harold H. Shepard, Entomologist, U.S. Department of Agriculture, formerly Associate Professor of Insect Toxicology, Cornell University.

Treats the chemistry of insecticides, the history of their use, their commercial importance here and abroad, the nature of the major uses, the influence of environment on effectiveness. Materials are arranged according to their chemical relationships. Two chapters relating to organic compounds largely new as insecticides. Illustrative data in form of tables, and a convenient appendix of equivalents arranged for practical use in the field. 504 pages..... $8.00

WEED CONTROL
W. W. Robbins, A. S. Crafts, and R. N. Raynor

A textbook-manual presenting a modern view of the rapidly developing field of chemical weed control. Reports in detail the research on which most modern herbicide usage is based. Weeds, their reproduction, prevention, biological control, chemicals in weed control. Herbicides, foliage contact applications, hormone-like substances, root applications, evaluations of combinations of chemical applications. Weeds of grasslands and turf. Special weed problems, cropped and uncropped areas. Published 1952. 503 pages, 155 illustrations $8.00

INSECT, FUNGUS AND WEED CONTROL
Dr. E. R. de Ong

The information is grouped according to field of application rather than to chemical composition or nomenclature. Chapters on insecticide label, seed disinfectants, herbicides, forest insects and diseases, livestock insects, and the pests found in household and industry. Fumigation of warehouses, residual sprays and preservatives for fruits, vegetables and wood products are covered. An up-to-date guide on pest control with the needs of operators, agricultural and structural specialists carefully considered. Shippers and warehouse personnel will find the book useful..... $10.00

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Vincent Sauchelli

Vincent Sauchelli Joins National Plant Food Institute Staff

WASHINGTON — Official announcement has been made by the National Plant Food Institute of the appointment of Dr. Vincent Sauchelli to the Institute staff as chemical technologist.

Currently, Dr. Sauchelli is concentrating his efforts on an Institute sponsored study of sampling and chemical analysis of fertilizer. A task force of state control officials and industry personnel has been appointed by Dr. Russell Coleman, Institute executive vice president, to supervise this project.

Dr. Sauchelli formerly was director of agricultural research for the Davison Chemical Co., Division of W. R. Grace & Co.

He is the author of two books, "Manual on Fertilizer Manufacture" and "Phosphates in Agriculture." He has served as chairman of the Division of Fertilizer and Soil Chemistry, American Chemical Society, for two years, and was the organizer of the Fertilizer Industry Round Table.

Convention Dates Set For Colorado Dealers

DENVER — Dates for the annual convention of the Colorado Grain, Milling & Feed Dealers Assn. will be Feb. 23-25, 1958, according to Les Grandbouche, association president.

He said the convention will be held at the Shirley-Savoy Hotel in Denver. Program plans will be made following the fall meeting of the board of directors, Mr. Grandbouche said.

1958 Convention Set For Kansas Dealers

HUTCHINSON, KANSAS — Dates for the annual convention of the Kansas Grain & Feed Dealers Assn. have been set for May 1-3, 1958. The meeting will be held in the Broadview Hotel in Wichita, Kansas.

The convention will be the 61st annual meeting of the group, O. E. Case, secretary-treasurer, announced.

Joins Michigan Chemical

ST. LOUIS, MICH. — Richard E. Brandt has joined the research staff of Michigan Chemical Corp. here, according to Dr. Dwight Williams, director of research. Mr. Brandt was recently with Battelle Memorial Institute, Columbus, Ohio, as a research chemist and prior to this was connected with Babcock and Wilcox Research Center, at Alliance, Ohio, in a similar capacity.

IRRIGATION EXPOSITION

ROSWELL, N.M.—The second annual irrigation exposition will be held Dec. 5 at the Eastern New Mexico Fairgrounds in Roswell.

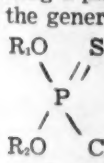
Industry Patents and Trademarks

2,803,531

Process for the Production of Monoammonium Phosphate and Other Products from Raw Phosphate. Patent issued Aug. 20, 1957, to Gunder Georg Ulrich Wasmuth Swensen and Gust Riddervold Lindeman Swensen, Heroya, near Porsgunn, Norway, assignors to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Oslo, Norway. The process of obtaining substantially fluorine-free monoammonium phosphate and nitrogen-phosphorus fertilizer from raw phosphate which comprises the following steps: (1) treating the raw phosphate with nitric acid of a concentration of from 53% to 63% in an amount which exceeds the equivalent amount of calcium in the raw phosphate by at least 0.15 mols N_2O_5 per mol of P_2O_5 in the raw phosphate; (2) dividing the solution obtained by step (1) into two portions in the ratio of about 80% (A) to 20% (B); (3) cooling portion (A) to a temperature of about —10° C. to crystallize up to about 95% of the calcium content thereof as calcium nitrate tetrahydrate and separating the crystals to obtain phosphorus-containing filtrate (A); (4) neutralizing filtrate (A) with sufficient gaseous ammonia to precipitate a sludge containing calcium fluoride and calcium, iron, and aluminum phosphates, and to form a solution containing monoammonium phosphate, and then removing the sludge therefrom; (5) cooling filtrate (A) to about 40° C. to crystallize therefrom substantially fluorine-free monoammonium phosphate, and separating the crystals; (6) adding residual filtrate (A) to portion (B); (7) treating the sludge obtained in step (4) with a mineral acid to dissolve the phosphate content thereof as phosphoric acid and to separate the same from insoluble calcium fluoride and other insoluble impurities, and then adding said acid solution to portion (B); and (8) neutralizing portion (B) with an alkali to obtain a fertilizer mixture containing nitrogen and phosphorus.

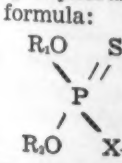
2,803,580

Phosphorus Derivatives, Process for Their Preparation and Compositions Containing Same. Patent issued Aug. 20, 1957, to Jean Metivier, Arpajon, France, assignor to Societe des Usines Chimiques Rhone-Poulenc, Paris, France. A process for the preparation of a phosphorus derivative which comprises reacting a phosphorochlorothionate of the general formula:



with a phenol or thiophenol of the general formula $HX—Ar—SO_2R_3$, in which X represents one of the group consisting of oxygen and sulphur, Ar represents a member of the class consisting of phenylene, chlorophenylene and methylphenylene groups, R_1 and R_2 are each an alkyl group containing 1 to 4 carbon atoms, and R_3 represents a member of the class consisting of alkyl and chloroalkyl groups containing from 1 to 4 carbon atoms and the phenyl group.

An insecticidal composition which comprises a phosphorus derivative of the general formula:



in which X represents one of the group consisting of oxygen and sulphur, Ar represents a member of the class consisting of phenylene, chlorophenylene and methylphenylene groups, R_1 and R_2 are each an alkyl group containing 1 to 4 carbon atoms, and R_3 represents a member of the class consisting of alkyl and chloroalkyl groups containing from 1 to 4 carbon atoms and the phenyl group and at least one diluent compatible therewith.

2,803,673

Isolation of Delta Isomer of Benzene Hexachloride. Patent issued Aug. 20, 1957, to Arnold N. Johnson, Paterson, N.J., assignor to Commercial Solvents Corp., Terre Haute, Ind. A process for the purification of the delta isomer of benzene hexachloride which comprises extracting a mixture of all benzene hexachloride isomers containing at least about 40% delta isomer and not more than about ⅓ the delta isomer content as alpha isomer with a solvent selected from the group consisting of carbon tetrachloride, perchloroethylene, and chloroform, removing the insoluble residue, extracting the said delta isomer-containing residue at an elevated temperature with an amount of a solvent selected from the group consisting of a lower aliphatic alcohol, benzene, toluene, xylene, and naphtha, such that the resulting solution is substantially saturated with the delta isomer, removing the insoluble materials from the solution at the said elevated temperature and then cooling the resulting solution to crystallize the substantially pure delta isomer of benzene hexachloride.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of $25 must accompany each notice of opposition.

Insectoaid, in capital letters, for powdered material sold to insecticide manufacturers for use as an ingredient in insecticides. Filed Nov. 19, 1956, by Perlite Corp. of America, New York. First use, Aug. 21, 1956.

Conoco, within triangular design, for chemical weed killer. Filed Dec. 10, 1956, by Continental Oil Co., Ponca City, Okla. First use Dec. 30, 1955.

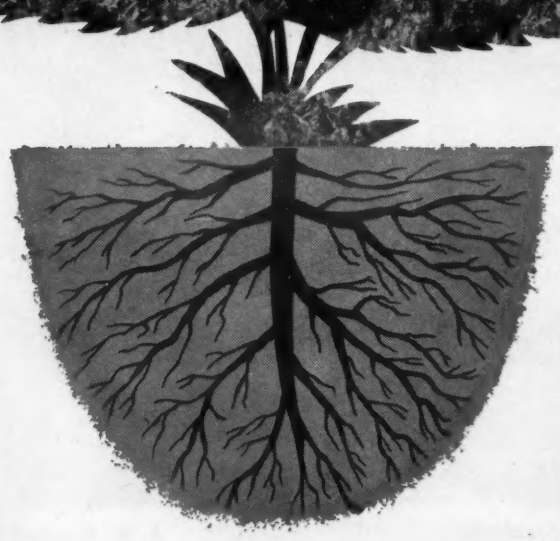
T.W.P., in capital letters, for chemical preparation used as a protective coating on seeds to prevent deterioration thereof by fungus and live organisms. Filed Jan. 21, 1955, by Northrup, King & Co., Minneapolis, Minn. First use on or about June 1, 1954.

Conoco, in capital letters, for chemical weed killer. Filed Dec. 10, 1956, by Continental Oil Co., Ponca City, Okla. First use Dec. 30, 1955.

Vikane, for structural fumigant for controlling drywood termites and other wood-boring insects. Filed Feb. 11, 1957, by The Dow Chemical Co., Midland, Mich. First use Sept. 21, 1956.

Spee-D-Gro, in hand-lettered design, for fertilizer. Filed May 4, 1956, by the Stadler Fertilizer Co., Cleveland, Ohio. First use March 28, 1956.

Fred Streeter's, in capital letters, for fertilizers. Filed Nov. 1, 1956, by Plantoids Ltd., Bromley, England. First use Oct. 30, 1956.



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OHIO TOUR

(Continued from page 1)

None of the chemicals gave striking results this year because of the favorable conditions for growth of the weed, Mr. Davis said. Although its action is unpredictable, lead arsenate has been showing up well in pre-emergence tests, he said.

There was interest in a pesticide machinery demonstration. Tools were shown that place volatile chemicals deep in the soil to kill off insects, disease organisms and nematodes. Researchers said there was hope in five or six years for chemicals that would control all the major soil-borne pests.

The danger in the use of some materials in the orchard was pointed out by a plant pathologist. H. F. Winter said that growers in Ohio have been complaining that some of the organic mercuries have been adversely affecting fruit set. Mr. Winter's tests have borne out this statement, especially in young trees, where "there is trouble enough with getting fruit set."

The fruit set was most drastically affected by the mercuries if used in the first spray or during the petal fall application, Mr. Winter said. Not as much injury was noted when the chemicals were used when the trees were in full bloom.

Bacterial spot in peaches was reported to be causing trouble in Ohio orchards this year. The problem is limited to a few northern counties.

Tests to compare the effectiveness of different droplet sizes and quantities of insecticides were reported by J. P. Sleesman. Major problem was to control the imported cabbage worm with endrin. Droplet sizes from 125 microns to 500 and applications of from 20 to 40 gallons per acre were used. But the insect count showed that these factors made little difference in control of the cabbage worm, Mr. Sleesman concluded.

A search for a one-shot insecticide that will control all the pests in the major vegetables such as tomato, bean, potato, cabbage and pepper, was reported. Mr. Sleesman said that leafhopper and imported cabbage worm were the only serious pests this year. Endrin topped the list in effectiveness of chemicals tried, he said. A newer chemical — Sevin — used at Marietta on Mexican bean beetle gave excellent control while check plants were burdened under a population of about 30 larvae per plant, said the entomologist.

C. R. Cutright said that his treatments for red mite showed Trithion is best on Stayman Winesap, Jonathan and Grimes Golden. He said his experiments point out the importance of applying two miticides regularly, no matter which one is used. The first is to kill the motile forms and the second to knock out late hatching mites, he said.

Weed control work in potato, lima bean, snap bean and sweet corn was explained by E. K. Alban. He said that growers on heavy soil such as Ohio's should not apply low dosages of Dinitro such as growers used in the East. He recommended 6 lb. per acre rather than the 3 lb. used on light soils.

Mr. Alban said timing is extremely important in getting satisfactory weed kill. "Twenty-four hours," he said, "can be the difference between a good or poor kill."

Amino triazole at the rate of 8 lb. in 50 gallons of water per acre was reported as a good weed killer and suppressor in grape vineyards.

J. B. Polivka discussed the effect of chlordane on bent grass. With higher rates of the insecticide the grass was greener, but there was usually less grass produced and more gouged areas, he said. A cadmium compound was announced by H. A. Runnels as an effective and long lasting chemical to use in controlling dollar spot in bentgrass. This is the golf course owner's major disease, creating dollar-shaped brown spots in the turf.

DDT was listed as the best control of apple tree and bronze birch borers in shade trees, by Robert Williams. His tests were run on maple, honey locust, dogwood and birch, the roots of which were purposely damaged so the female would be encouraged to deposit her eggs.

Dr. H. C. Young, chairman of the department of botany and plant pathology, called the peach and plum insect control work of Roy Rings "among the finest in the country." Mr. Rings is field testing chemicals to control plum curculio, tarnished plant bug and insects that cause catfacing in peaches and plums. His studies on control of two-spotted and European mite on peaches revealed four treatments that gave perfect kill: Kelthane, Mitox, Tedion and Trithion.

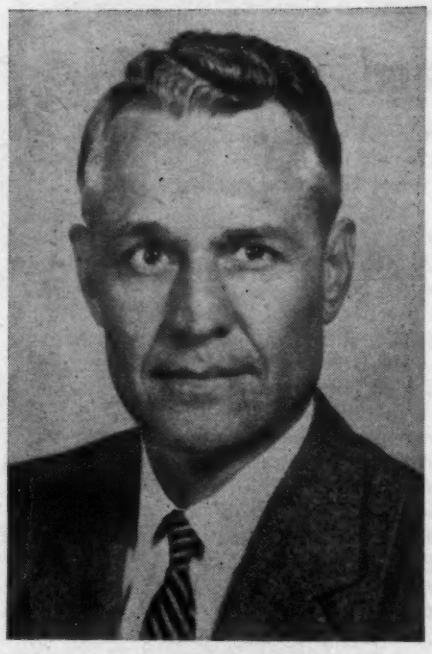
Visitors examined 28 of J. D. Wilson's tomato plots with 28 different fungicides, both old and new, used for control of disease. "Growers have all sorts of ideas on the kinds of tomato fungicides to use," he said. Manzate gives good anthracnose control, he reported, although it is more expensive than zerlate which is also effective. A good idea may be to use a combination of both chemicals, he suggested.

SBA Loans

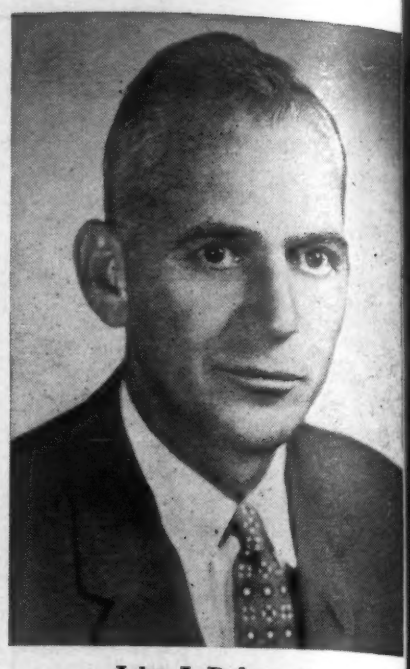
WASHINGTON—Approval of loans to two fertilizer firms was announced Aug. 28 by Wendell B. Barnes, administrator of the Small Business Administration. The loans were $100,000 to Crystal Chemical Co., Inc., South Sioux City, Neb., a fertilizer plant, and $80,000 to the Arical Co., Inc., Blythe, Cal., fertilizer manufacturer.

NEBRASKA APPOINTMENT

FAYETTEVILLE, ARK.—Dr. Theodore C. Bigger has been named associate professor of agronomy and associate agronomist at the University of Nebraska. He will teach soils courses and carry on research on soil fertility problems.



J. J. Pointer



John J. Dalrymple

J. J. Pointer New Smith-Douglass Eastern Sales Manager

NORFOLK, VA.—The Smith-Douglass Co. has announced the appointment of J. J. Pointer, manager of the company's Wilmington, N.C., plant, as assistant sales manager for the company's eastern fertilizer division, effective Sept. 1. Mr. Pointer has managed the Wilmington plant since 1952, after having supervised a central North Carolina sales territory from Raleigh for several years. He joined Smith-Douglass in 1939, after attending Elon College. In his new position, he will live in Norfolk.

The company's eastern fertilizer division consists of plants at Norfolk and Danville, Va., with plants or sales offices at Greensboro, Statesville, Kinston, Washington and Wilmington, N.C.

John J. Dalrymple was named to succeed Mr. Pointer as manager of the Smith-Douglass Wilmington plant. He joined S-D in 1935 and has for many years supervised a North Carolina sales territory, living in Dunn.

Smith-Douglass also announced that M. A. Glass will transfer to the company's midwestern fertilizer division, where he will continue to serve as an assistant sales manager. The company operates plants at Streator, Ill., and Albert Lea, Minn.

J. H. Culpepper, vice president, directs Smith-Douglass fertilizer sales. P. T. Smith is fertilizer sales manager.

Super Output Dips 7% in 1956-57

WASHINGTON — Production of superphosphate and other phosphatic fertilizer (100% APA) was down 7% and shipments were up 6% during the year ended June 30, 1957, as compared to previous fiscal year, according to the Bureau of the Census, U.S. Department of Commerce.

Total output during the 1957 season amounted to 2,346,566 short tons (100% APA), as compared with production for the comparable period a year earlier of 2,535,834 short tons (100% APA). Total shipments amounted to 1,785,447 and 1,692,239 short tons (100% APA), respectively, for the 1957 and 1956 seasons.

Normal and enriched superphosphate output amounted to 1,400,967 short tons (100% APA) in the 1957 season, as compared with production of 1,593,058 short tons a year earlier. This is a 12% drop.

Shipments of normal and enriched superphosphate, down 7%, amounted to 801,225 short tons (100% APA) during the 1957 season, as compared with shipments of 857,782 short tons a year ago.

Concentrated superphosphate output totalled 728,177 short tons (100% APA) during the 1957 season, as compared with 753,108 short tons turned out during the 1956 season. This represents a decline of 3%. Shipments, on the other hand were up 19% from 658,189 short tons in the 1956 season to 785,457 in 1957.

Both production and shipments of other phosphatic fertilizer showed an increase during the 1957 season. Output in 1957 amounted to 217,432 short tons (100% APA), an increase of 15% over 1956 production of 189,668 short tons. Shipments during 1957, up 13%, amounted to 198,765 short tons, as compared with shipments of 176,268 short tons a year ago.

CALIFORNIA APPOINTMENT

SACRAMENTO — Appointment of Dr. Thomas Charles Fuller as weed and seed botanist to succeed Mrs. Margaret K. Bellue, retired, was announced by the California Department of Agriculture. Dr. Fuller, a graduate of the University of Chicago in 1947, majored in plant morphology and cystogenetics. He is a native of Evanston, Ill. Dr. Fuller was employed by the Bureau of Plant Pathology, California Department of Agriculture in 1953, specializing in physiological disorders of plants.

J. J. Simmons

J. W. Kennady

Merck Announces Two Personnel Changes in Plant Product Sales

RAHWAY, N.J.—In connection with its accelerated sales program in plant products, the chemical division of Merck & Co., Inc. of Rahway has announced two changes in its marketing organization.

J. J. Simmons has been transferred to the sales department, where he will be responsible for sales of Gibrel, Agri-Strep and other plant chemicals.

J. W. Kennady has joined the market planning department as plant products manager. His appointment will be effective Sept. 3.

An agricultural graduate of Pennsylvania State University, Mr. Kennady has had wide experience in the farm field. He was associated with the U.S. Department of Agriculture for several years and held the position of products sales manager for agricultural chemicals, Diamond Alkali Co., before accepting the position with Merck.

WASHINGTON WIRE

No Bonanza for Pesticide Trade in Farm Plans

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON, D.C.—Despite the fact that provisions for weed and brush control are included in the usual agricultural conservation and soil bank programs, there will be no particular bonanza of marketing of pesticidal chemicals unless the industry itself makes a special effort to alert its dealers to the sales possibilities involved.

The newly-activated Great Plains Conservation Program, effective in ten states and involving some 221 counties, includes among its qualifications for eligibility, that a farmer must control brush on the acres involved. However, the program allows the farmer to decide what, if anything, he should do about the control of weeds on his reserved acres.

The situation presents to the pesticide industry a challenge to educate and sell these farmers on the desirability of controlling weeds and brush on the land set aside under government programs.

Although no major effort toward enforcement of the provisions for brush control is noted, there appears to be ample ground for the industry to remind the farmer that he should keep his land reasonably clean for the sake of its future use, if for no other reason.

★

There has been no major farm legislation in the 85th Congress, now winding up its first session. This result may be attributed to the shattering of the former cohesive farm bloc showing that the wheat-corn-cotton groups have lost their common ground of high rigid price supports and acreage allotment controls.

The commercial corn belt has slowly recognized that the wheat and cotton producers have stolen the monopoly the corn producers had on feed grains. Cotton farmers, under tight acreage allotments, have moved into corn production thereby depriving the southern areas of the old commercial corn belt from the export market. The corn farmer has also seen the wheat farmer move into competition with corn as the wheat acreage allotments encouraged sorghum competition with corn.

The wheat and cotton groups moved into a new affinity as they espoused the cause of a two-price system for their crops. This system failed to attract support from the processing and merchandising interests.

The two-price system—with one price for the domestic market and another for export—is seen as a form of domestic processing tax which has been previously declared unconstitutional. This latest attempt has failed to gain broad favor and in farm political circles it is acknowledged that the general public is not enchanted with further drains on the urban taxpayer through poorly disguised requirements to support a farm program.

OREGON STRAWBERRY CROP

PORTLAND, ORE.—Oregon's 1957 post-harvest strawberry crop estimate is placed at 91,700,000 lb., unchanged from the July 1 crop reporting service. This new record production is 10% above the previous record of 83,500,000 lb. set in 1955 and compares with the 70,700,000 lb. harvested in 1956 and the 1949-55 average of 73,700,000 lb. Acreage harvested at 17,300 acres, is 1% below the record 1955 acreage and 3% above last year. In spite of considerable loss from rot and overripe berries a record yield of 5,300 lb. per acre was picked.

PHYTOPATHS

(Continued from page 1)

about 90 parts per million against late blight and at about 15 parts per million against bean rust.

Treating sorghum seed with a fungicide-insecticide mixture before planting results in better plant emergence and fewer disease problems, a Kansas State College scientist told the APS.

Earl D. Hansing, reporting on his seed treatment experiments, said that of the wide variety of chemicals tested, a combination of thiram or captan fungicide with dieldrin insecticide, provided best results.

This combination, Mr. Hansing said, resulted in 60 to 100% increase in plant emergence as compared with that resulting from untreated seed. In one series of tests, covered smut disease was completely controlled by the treatment. Nearly 40% of the plants grown from infected but untreated seeds developed disease symptoms, he declared.

Halo blight, the only economically important disease of commercial green and dry beans grown in the semi-arid interior regions of British Columbia, has been successfully controlled by field spray treatment with the antibiotic, streptomycin sulfate, according to G. E. Wooliams, plant pathologist of the Canadian Department of Agriculture. He said this success represented progress toward his goal—a method of eradicating halo blight from bean seed stocks.

Mr. Wooliams believes that because of the restricted nature of bean culture in interior British Columbia, the crop would remain free of halo blight indefinitely if the disease once could be eradicated. He plans to modify the timing of spray treatments, the preparation of sprays, and the types of antibiotics used in the sprays in attempts to approach this goal.

Streptomycin sprays applied to infected beans at a concentration of 500 parts of active antibiotic per million of water proved most effective in field tests during the past two years, he said. Sprays were applied three times at weekly intervals after halo blight symptoms began to show up on the bean plants. Halo blight symptoms completely disappeared and failed to re-appear during the remainder of the growing season. However, fields planted with beans from the sprayed crop the following year developed about 6% infection.

LOUIS D. MATCHETTE DIES

MILWAUKEE—Louis D. Matchette, 82, board chairman of the Nitragin Co., died Aug. 20. He was president of the Nitragin Co. until eight years ago. The firm was founded in 1898 by his late brother, Franklin J. Matchette.

QUIZ
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2 Is your bag properly constructed for your product?
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4 Is the total cost of your bag out of proportion to the selling price of your product?
5 Does your product cost warrant redesigning your bag to merchandise your product more effectively?
6 Are you using the most economical filling machine available for packaging?
7 Are your current suppliers giving you the service you desire?
8 Are your suppliers integrated and capable of maintaining dependable service at all times, under all conditions?
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The regional circulation of this issue is concentrated in the Northeastern states.

BIOGRAPH . . .

Fred W. Hatch Reviews a Career Well Done as Retirement from Industry Nears

After having been closely associated with the pesticide industry for a quarter of a century, during the latest year of which he was president of the National Agricultural Chemicals Assn., Fred W. Hatch retires from his official position in the NAC after the current fall meeting at Spring Lake, N. J. He plans also to retire at the end of this year, from Shell Chemical Corp. where he is manager of its agricultural chemical sales division.

In looking over the pesticide industry from the vantage point of one who has had long years of working in it and with it, Mr. Hatch has an unusually clear picture of the industry's past, present and future.

"This is a dynamic industry and the past few years have seen many changes," he told Croplife a few days ago. "Starting with the Delaney hearings on pesticide chemicals in 1951, through passage of the Miller amendment and now with the implementation of the Miller law, the industry has been faced with a variety of basic problems.

Fred W. Hatch

"I want to compliment others in the NAC and the Washington staff particularly for their contributions toward helping all segments of the industry meet these problems.

"To do it, the association staff has been enlarged, the budget has been increased, and the number and size of industry committees have been expanded.

"During the time I've been a board member and officer, the association has set up a broad safety education program and expanded its public relations work to counteract unfavorable publicity coming from crackpots, organic farmers, and others who have been trying to hold back progress in agriculture.

"We've also seen rapidly growing interest in pest control in many non-agricultural areas—particularly in highway roadside beautification and maintenance, home gardening, park management, forest pest control, and in public health programs for control of such dread diseases as malaria and sleeping sickness.

"All of this means a broadening base for sales of agricultural chemicals. This has been an actively promoted objective of the association along with its work in getting up-to-date information about scientific pest control to agricultural advisers and to growers."

Fred has been part of the pesticide picture for a long time, although he hadn't really intended to head in that direction when he began his stint with Shell back in 1932. Hired as head of the newly-formed asphalt department of Shell Oil Co., he expected to continue an engineering career which was indicated by his holding a degree in civil engineering from the University of California.

In fact, he had been in business for himself before joining Shell, having operated a construction machinery firm. But the lean days of the early thirties and bleak immediate prospects for his business conspired to make him heed Shell's invitation to come over and run its asphalt department. Having made the move, it wasn't long before Mr. Hatch found himself becoming familiar with the use of petroleum oils for spraying citrus orchards, an enterprise in which the company was pioneering at that time.

Later becoming Pacific Coast manager of special products, he participated actively in the development of Shell's pesticides and became chairman of the committee responsible for the establishment of the agricultural laboratory and experimental farms operated by Shell Development Co. at Modesto, Cal.

Mr. Hatch's philosophy regarding the proper functions of a research laboratory was based on the idea that personnel on this level should be concerned mainly with basic work toward development of products a number of years ahead. Researchers here, he has stated, should not be bothered too much with the day-to-day technical problems that arise. Operating on this premise, the company's laboratories at Modesto moved ahead perhaps more rapidly than would otherwise have been the case.

As the pesticide end of the Shell business expanded and the trend pointed more and more toward the production of organic chemicals as finished products, the division was rapidly getting into the field of chemicals rather than of petroleum. Mr. Hatch, along with other Shell executives, observed that there should be a shift away from the production of finished goods, in favor of basic chemicals.

The agricultural chemical products marketed by Shell at that time were finished goods; formulations of DDT, toxaphene, petroleum weed control materials with pentachlorophenol, and D-D, the soil fumigant. The need for Shell to get out of the finished goods business became more and more evident as time went on.

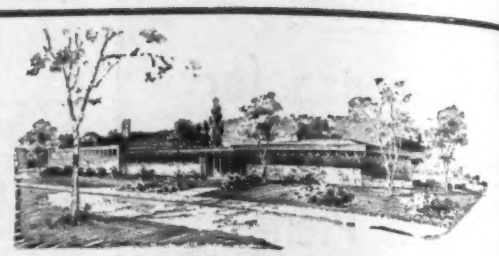
Thus, in 1949, the Shell Chemical Corp. was formed and the agricultural chemicals department was transferred to its jurisdiction. Mr. Hatch was moved to New York City as manager of agricultural chemical sales.

Three years later, Shell purchased the Julius Hyman Co. of Denver, manufacturer of aldrin and dieldrin, and Fred was made vice president in charge of sales with offices in Denver. The Hyman name was discontinued later, and Mr. Hatch returned to New York to assume the duties of the position from which he will retire at the end of this year.

In fact, Fred states that he will probably remain in New York even after his retirement becomes effective. He wants to remain close to the pesticide trade in one way or another, and hopes to maintain the scores of friendships made throughout the industry during the past many years.

Chemical trade people on all levels extend to Fred their best wishes for a happy and active retirement. It is difficult to imagine a man of his energy settling down to a walk, and we doubt if we'll see him do that. To a fellow who has become accustomed to shuttling back and forth across the continent frequently with stops at New York, Denver, San Francisco, and many intermediate points, retirement might mean an urge to "stay put."

With Fred, however, we have a feeling that his tapering off will be of a gradual nature and that his many friends within the orbit of the NAC Assn. as well as fellow-workers at Shell will continue to hear a lot from him.



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Croplife

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NBP — *Member of National Business Publications*

CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is $5 for one year ($8 a year outside the U.S.). Single copy price, 25¢.

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Managing Editor

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MEETING MEMOS

Sept. 10—Minnesota Group of Middle West Soil Improvement Commmittee Conference, Soils Building, University of Minnesota Farm Campus, St. Paul.

EDITOR'S NOTE—The listings above are appearing in this column for the first time this week.

Sept. 4—Kentucky Fertilizer Conference, Campbell House, Lexington, Ky

Sept. 4-6—National Agricultural Chemicals Assn., Annual Meeting Essex & Sussex, Spring Lake, N.J., L. S. Hitchner, 1145 19th St. N.W., Washington 6, D.C., Executive Secretary.

Sept. 5—Annual Farm Day, State College, New Mexico. Gordon B. Hoff, program chairman.

Sept. 5-6—Great Lakes States Anhydrous Ammonia Meeting, Michigan State University, East Lansing, Mich.

Sept. 6—Annual Agronomy Fall Field Day, University of Nebraska, Lincoln; Clinton Hoover, extension agronomist, chairman.

Sept. 8-13—American Chemical Society, 132nd Annual Meeting, New York City.

Sept. 8-15—International Congress of Crop Protection, Hamburg, Germany.

Sept. 24-25—New England Fertilizer Conference, Bald Peak, Colony Club, Melvin Village, N.H.

Oct. 2-4—Eleventh Annual Beltwide Cotton Mechanization Conference, Shreveport, La.

Oct. 3—New Jersey Fertilizer Conference, Rutgers University, New Brunswick, N.J.

Oct. 3-5—Pacific Northwest Plant Food Assn., Annual Convention, Sun Valley, Idaho, Leon S. Jackson, Lewis Bldg., Portland 4, Ore., Secretary.

Oct. 7-8—Western Agricultural Chemicals Assn., Fall Meeting, Villa Hotel, San Mateo, Cal., C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., Executive Secretary.

Oct. 14—Sixth Annual Sales Clinic of the Salesmen's Assn., American Chemical Society, Hotel Roosevelt, New York.

Oct. 15—Association of Official Agricultural Chemists, 71st Annual Meeting, Washington, D.C., Dr. William Horwitz, Box 540, Benjamin Franklin Station, Washington, D.C., secretary-treasurer.

Oct. 17—Conference on Chemical Control Procedures for Industry Chemical Control Analysts, Shoreham Hotel, Washington, D.C. Sponsored by National Plant Food Institute.

Oct. 18—Association of American Fertilizer Control Officials (States Relations Committee, 8 p.m. Oct. 17), Shoreham Hotel, Washington, D.C., B. D. Cloaninger, Box 392, Clemson, S.C., Secretary-Treasurer.

Oct. 21-22—Fertilizer Section, National Safety Congress, LaSalle Hotel, Chicago.

Oct. 29—Grassland Farming Conference, Rutgers University, New Brunswick, N.J.

Oct. 29-30—Seventh Annual Northwest Garden Supply Trade Show of Oregon Feed & Seed Dealers Assn., Portland, Ore. Masonic Temple.

Oct. 29-31—Entomological Society of Canada and Entomological Society of Alberta, Annual Meetings, Lethbridge, Alberta.

Oct. 31—19th annual meeting, Middle West Soil Improvement Committee, Sherman Hotel, Chicago. Z. H. Beers, 228 N. LaSalle St., Chicago, executive secretary.

Oct. 31-Nov. 1—Second Annual Southern Fertilizer Conference and Second Annual Southern Soil Fertility Conference, Dinkler Plaza Hotel, Atlanta, Ga.

Nov. 3-5—California Fertilizer Assn. 34th Annual Convention, St. Francis Hotel, San Francisco, Sidney H. Bierly, General Manager, 475 Huntington Drive, San Marino 9, Cal.

Nov. 6-8—Fertilizer Industry Round Table, Sheraton Park Hotel, Washington, D.C.

Nov. 13-15—National Aviation Trades Assn., Annual Convention, Hotel Adolphus, Dallas, Texas.

Nov. 17-19—National Fertilizer Solutions Assn., Annual Convention, Netherland-Hilton Hotel, Cincinnati, Muriel F. Collie, 2217 Tribune Tower, Chicago 11, Ill.

Nov. 18-20—Carolinas-Virginia Pesticide Formulators Assn., Carolina Hotel, Pinehurst, N.C. W. R. Peele, 516 S. Salisbury, Raleigh, N.C., secretary.

Dec. 1-3—Southern Seedsmen's Assn., Jung Hotel, New Orleans.

Dec. 2-5—Entomological Society of America, 5th Annual Meeting, Hotel Peabody, Memphis, Tenn., R. H. Nelson, 1530 P St., N.W., Washington 5, D.C., Executive Secretary.

Dec. 2-5—Cotton States Branch, Entomological Society of America, 32nd Annual Meeting, Hotel Peabody, Memphis, Tenn., M. E. Merkl, Box 202, Leland, Miss., Secretary-Treasurer.

Dec. 3-4—Iowa State College Fertilizer Manufacturer's Conference and Fertilizer Dealers' Short Course, Memorial Union, Iowa State College campus, Ames, Ia.

Dec. 8-12—Vegetable Growers Association of America convention, Jung Hotel, New Orleans, La.

Dec. 9-12—Chemical Specialties Manufacturers Assn., Hollywood Beach Hotel, Hollywood, Fla.

Dec. 10-12—North Central Weed Control Conference, 14th Annual Meeting, Hotel Savory, Des Moines, Iowa. Lyle A. Derscheid, agronomy department, South Dakota State College, Brookings, Program Chairman.

Dec. 11-13—Agricultural Ammonia Institute, Seventh Annual Meeting, Hotel Marion, Little Rock, Ark., Jack F. Criswell, Claridge Hotel, Memphis, Executive Vice President.

Dec. 12-13—Beltwide Cotton Production Conference, Hotel Peabody, Memphis, Tenn.

1958

Jan. 7-8—Texas Fertilizer Conference, Texas A&M, College Station, Texas.

Jan. 13-15, 1958—Weed Society of America and Southern Weed Conference, joint meeting, Peabody Hotel, Memphis, Tenn.

Jan. 21-23—California Weed Conference, San Jose, Cal.

Feb. 13-14—Agronomists-Industry Joint Meeting, Edgewater Beach Hotel, Chicago, sponsored by the Middle West Soil Improvement Committee, Z. H. Beers, 228 N. LaSalle St., Chicago 1, Ill., Executive Secretary.

Feb. 20-22—Nitrogen Conference, University of Minnesota, St. Paul. M. W. Mawhinney, Smith-Douglass Co., Albert Lea, Minn., Chairman.

March 4-5—Western Cotton Production Conference, Hotel Cortez, El Paso, Texas, Conference Sponsored by the National Cotton Council and the Five State Cotton Growers Assn.

June 15-18—National Plant Food Institute, Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 25-27—Pacific Branch, Entomological Society of America, San Diego, Cal.

July 18-19—Southwest Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

Great Plains Council Discusses Conservation

CUSTER, S.D.—Groundwork which will help take a new, long range Great Plains conservation program to farmers and ranchers under Public Law 1021 was set at the 10-state Great Plains agricultural council meeting held recently near here.

The council renewed a recommendation for a "controlled climate-plant growth" laboratory for research on plants and soils under virtually all Great Plains weather conditions.

The council is composed of extension service and experiment station officials from land grant colleges and the heads of U.S. Department of Agriculture agencies in Texas, New Mexico, Colorado, Oklahoma, Kansas, Nebraska, North and South Dakota, Wyoming and Montana.

New Research Building

NEW HAVEN, CONN.—Offices of the Connecticut Agricultural Experiment Station, formerly in the Whitney Bldg., have been moved to Osborne Library on the station's Huntington St. property. The Whitney Building, a converted residence about 100 years old, will soon be removed to make room for a new building, Slate Laboratory. Slate Laboratory will provide complete facilities for the research departments of genetics, forestry, and soils and climatology.

ALFALFA RESEARCH DAY

LINCOLN, NEB.—The University of Nebraska's annual alfalfa research day will be Oct. 7 on the College of Agriculture campus.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

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NEW YORK—A dividend of 25¢ a share was declared Aug. 26 on the outstanding common stock of this Commercial Solvents Corp., payable Sept. 30, 1957 to stockholders of record at the close of business on Sept. 6, 1957. Previous payment was 25¢ a share on June 28, 1957.

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